

Landfill Documents





NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Gulf Coast Inc.
Austin Division
2621 Ridgepoint Drive, Suite 130
Austin, TX 78754

Tel: (512) 928-8905
Fax: (512) 928-3208

ANALYTICAL REPORT

Doug Frick
McCULLEY, FRICK & GILMAN, INC.
5818 Balcones Drive
Suite 202
Austin, TX 78731

08/17/1992

JOB NO: 92.1729
SAMPLE NO: 81064

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: MW-103

Date Taken: 07/16/1992

Date Received: 07/17/1992

Alkalinity, bicarb (CACO3)	620.	mg/L
Alkalinity, carbonate (CACO	<1.	mg/L
Alkalinity, phenol (CACO3)	<1.	mg/L
Alkalinity, total (CACO3)	620.	mg/L
Anion/Cation Balance	1.08	% Error
Chloride	454.	mg/L
Fluoride	0.4	mg/L
Hardness, Total	832.	mg/L
N-Nitrate	0.20	mg/L
pH	6.3	units
Solids, Total Dissolved	1,730.	mg/L
Specific Conductance	2,670.	umhos/cm
Sulfate, Turbidimetric	250.	mg/L
Total Organic Carbon (W) a	16.	mg/L
Total Organic Carbon (W) b	16.	mg/L
Total Organic Carbon (W) c	15.	mg/L
Total Organic Carbon (W) d	17.	mg/L
Calcium, AA	270.	mg/L
Iron, AA	3.3	mg/L
Magnesium, AA	37.	mg/L
Manganese, AA	7.8	mg/L
Potassium, AA	24.	mg/L
Sodium, AA	290.	mg/L

Pam Jupe
Pam Jupe, Manager
Austin Division





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08/17/1992

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SAMPLE NO: 81064

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: MW-103

Date Taken: 07/16/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

Acetone	<100.	ug/L
Acrolein	<10.0	ug/L
Acrylonitrile	<10.0	ug/L
Benzene	<5.0	ug/L
Bromodichloromethane	<5.0	ug/L
Bromoform	<5.0	ug/L
Bromomethane	<10.0	ug/L
2-Butanone	<100.	ug/L
Carbon disulfide	<5.0	ug/L
Carbon tetrachloride	<5.0	ug/L
Chlorobenzene	<5.0	ug/L
Chloroethane	<10.0	ug/L
2-Chloroethylvinyl ether	<10.0	ug/L
Chloroform	<5.0	ug/L
Chloromethane	<10.0	ug/L
Dibromochloromethane	<5.0	ug/L
1,1-Dichloroethane	<5.0	ug/L
1,2-Dichloroethane	<5.0	ug/L
1,1-Dichloroethene	<5.0	ug/L
cis-1,2-Dichloroethene	24.	ug/L
trans-1,2-Dichloroethene	<5.0	ug/L
1,2-Dichloropropane	<5.0	ug/L
cis-1,3-Dichloropropene	<5.0	ug/L
trans-1,3-Dichloropropene	<5.0	ug/L
Ethylbenzene	<5.0	ug/L
2-Hexanone	<50.0	ug/L
Methylene chloride	<5.0	ug/L
4-Methyl-2-pentanone	<50.	ug/L
Styrene	<5.0	ug/L


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SAMPLE DESCRIPTION: MW-103

Date Taken: 07/16/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

1,1,2,2-Tetrachloroethane	<5.0	ug/L
Tetrachloroethene	<5.0	ug/L
Toluene	<5.0	ug/L
1,1,1-Trichloroethane	<5.0	ug/L
1,1,2-Trichloroethane	<5.0	ug/L
Trichloroethene	<5.0	ug/L
Trichlorofluoromethane	<5.0	ug/L
Vinyl acetate	<50.0	ug/L
Vinyl chloride	27.	ug/L
Xylenes	<5.0	ug/L


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08/17/1992

JOB NO: 92.1729
SAMPLE NO: 81065

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: MW-104

Date Taken: 07/16/1992

Date Received: 07/17/1992

Alkalinity, bicarb (CACO3)	380.	mg/L
Alkalinity, carbonate (CACO	<1.	mg/L
Alkalinity, phenol (CACO3)	<1.	mg/L
Alkalinity, total (CACO3)	380.	mg/L
Anion/Cation Balance	1.63	% Error
Chloride	70.	mg/L
Fluoride	0.4	mg/L
Hardness, Total	344.	mg/L
N-Nitrate	3.59	mg/L
pH	6.8	units
Solids, Total Dissolved	738.	mg/L
Specific Conductance	1,130.	umhos/cm
Sulfate, Turbidimetric	140.	mg/L
Total Organic Carbon (W) a	1.	mg/L
Total Organic Carbon (W) b	1.	mg/L
Total Organic Carbon (W) c	1.	mg/L
Total Organic Carbon (W) d	1.	mg/L
Calcium, AA	134.	mg/L
Iron, AA	0.08	mg/L
Magnesium, AA	11.	mg/L
Manganese, AA	<0.01	mg/L
Potassium, AA	3.5	mg/L
Sodium, AA	120.	mg/L

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SAMPLE NO: 81065

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San Marcos Landfill

SAMPLE DESCRIPTION: MW-104

Date Taken: 07/16/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

Acetone	<100.	ug/L
Acrolein	<10.0	ug/L
Acrylonitrile	<10.0	ug/L
Benzene	<5.0	ug/L
Bromodichloromethane	<5.0	ug/L
Bromoform	<5.0	ug/L
Bromomethane	<10.0	ug/L
2-Butanone	<100.	ug/L
Carbon disulfide	<5.0	ug/L
Carbon tetrachloride	<5.0	ug/L
Chlorobenzene	<5.0	ug/L
Chloroethane	<10.0	ug/L
2-Chloroethylvinyl ether	<10.0	ug/L
Chloroform	<5.0	ug/L
Chloromethane	<10.0	ug/L
Dibromochloromethane	<5.0	ug/L
1,1-Dichloroethane	<5.0	ug/L
1,2-Dichloroethane	<5.0	ug/L
1,1-Dichloroethene	<5.0	ug/L
cis-1,2-Dichloroethene	<5.0	ug/L
trans-1,2-Dichloroethene	<5.0	ug/L
1,2-Dichloropropane	<5.0	ug/L
cis-1,3-Dichloropropene	<5.0	ug/L
trans-1,3-Dichloropropene	<5.0	ug/L
Ethylbenzene	<5.0	ug/L
2-Hexanone	<50.0	ug/L
Methylene chloride	<5.0	ug/L
4-Methyl-2-pentanone	<50.	ug/L
Styrene	<5.0	ug/L


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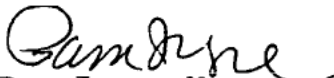
SAMPLE DESCRIPTION: MW-104

Date Taken: 07/16/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

1,1,2,2-Tetrachloroethane	<5.0	ug/L
Tetrachloroethene	<5.0	ug/L
Toluene	<5.0	ug/L
1,1,1-Trichloroethane	<5.0	ug/L
1,1,2-Trichloroethane	<5.0	ug/L
Trichloroethene	<5.0	ug/L
Trichlorofluoromethane	<5.0	ug/L
Vinyl acetate	<50.0	ug/L
Vinyl chloride	<10.0	ug/L
Xylenes	<5.0	ug/L


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JOB NO: 92.1729
SAMPLE NO: 81066

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: MW-105

Date Taken: 07/16/1992

Date Received: 07/17/1992

Alkalinity, bicarb (CACO3)	344.	mg/L
Alkalinity, carbonate (CACO	<1.	mg/L
Alkalinity, phenol (CACO3)	<1.	mg/L
Alkalinity, total (CACO3)	344.	mg/L
Anion/Cation Balance	8.26	% Error
Chloride	50.	mg/L
Fluoride	0.5	mg/L
Hardness, Total	392.	mg/L
N-Nitrate	0.51	mg/L
pH	6.6	units
Solids, Total Dissolved	547.	mg/L
Specific Conductance	837.	umhos/cm
Sulfate, Turbidimetric	46.	mg/L
Total Organic Carbon (W) a	3.	mg/L
Total Organic Carbon (W) b	3.	mg/L
Total Organic Carbon (W) c	2.	mg/L
Total Organic Carbon (W) d	2.	mg/L
Calcium, AA	143.	mg/L
Iron, AA	0.05	mg/L
Magnesium, AA	8.	mg/L
Manganese, AA	0.11	mg/L
Potassium, AA	2.9	mg/L
Sodium, AA	70.	mg/L

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SAMPLE DESCRIPTION: MW-105

Date Taken: 07/16/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

Acetone	<100.	ug/L
Acrolein	<10.0	ug/L
Acrylonitrile	<10.0	ug/L
Benzene	<5.0	ug/L
Bromodichloromethane	<5.0	ug/L
Bromoform	<5.0	ug/L
Bromomethane	<10.0	ug/L
2-Butanone	<100.	ug/L
Carbon disulfide	<5.0	ug/L
Carbon tetrachloride	<5.0	ug/L
Chlorobenzene	<5.0	ug/L
Chloroethane	<10.0	ug/L
2-Chloroethylvinyl ether	<10.0	ug/L
Chloroform	<5.0	ug/L
Chloromethane	<10.0	ug/L
Dibromochloromethane	<5.0	ug/L
1,1-Dichloroethane	<5.0	ug/L
1,2-Dichloroethane	<5.0	ug/L
1,1-Dichloroethene	<5.0	ug/L
cis-1,2-Dichloroethene	<5.0	ug/L
trans-1,2-Dichloroethene	<5.0	ug/L
1,2-Dichloropropane	<5.0	ug/L
cis-1,3-Dichloropropene	<5.0	ug/L
trans-1,3-Dichloropropene	<5.0	ug/L
Ethylbenzene	<5.0	ug/L
2-Hexanone	<50.0	ug/L
Methylene chloride	<5.0	ug/L
4-Methyl-2-pentanone	<50.	ug/L
Styrene	<5.0	ug/L

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SAMPLE DESCRIPTION: MW-105

Date Taken: 07/16/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

1,1,2,2-Tetrachloroethane	<5.0	ug/L
Tetrachloroethene	<5.0	ug/L
Toluene	<5.0	ug/L
1,1,1-Trichloroethane	<5.0	ug/L
1,1,2-Trichloroethane	<5.0	ug/L
Trichloroethene	<5.0	ug/L
Trichlorofluoromethane	<5.0	ug/L
Vinyl acetate	<50.0	ug/L
Vinyl chloride	<10.0	ug/L
Xylenes	<5.0	ug/L


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07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81121

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: MW-106

Date Taken: 07/17/1992

Date Received: 07/17/1992

Alkalinity, bicarb (CACO3)	324.	mg/L
Alkalinity, carbonate (CACO	<1.	mg/L
Alkalinity, phenol (CACO3)	<1.	mg/L
Alkalinity, total (CACO3)	324.	mg/L
Anion/Cation Balance	7.58	% Error
Chloride	40.	mg/L
Fluoride	0.4	mg/L
Hardness, Total	344.	mg/L
N-Nitrate	13.9	mg/L
N-Nitrate/Nitrite	13.9	mg/L
N-Nitrite	<0.01	mg/L
pH	7.1 ^	units
Solids, Total Dissolved	706.	mg/L
Specific Conductance	1,050.	umhos/cm
Sulfate, Turbidimetric	130.	mg/L
Total Organic Carbon (W) a	1.	mg/L
Total Organic Carbon (W) b	1.	mg/L
Total Organic Carbon (W) c	1.	mg/L
Total Organic Carbon (W) d	1.	mg/L
Calcium, AA	130.	mg/L
Iron, AA	0.12	mg/L
Magnesium, AA	15.	mg/L
Manganese, AA	0.01	mg/L
Potassium, AA	24.	mg/L
Sodium, AA	12.	mg/L

^ Sample analyzed beyond holding time for parameter.

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SAMPLE NO: 81121

90-3135-5
San Marcos Landfill


SAMPLE DESCRIPTION: MW-106

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

Acetone	<100.	ug/L
Acrolein	<10.0	ug/L
Acrylonitrile	<10.0	ug/L
Benzene	<5.0	ug/L
Bromodichloromethane	<5.0	ug/L
Bromoform	<5.0	ug/L
Bromomethane	<10.0	ug/L
2-Butanone	<100.	ug/L
Carbon disulfide	<5.0	ug/L
Carbon tetrachloride	<5.0	ug/L
Chlorobenzene	<5.0	ug/L
Chloroethane	<10.0	ug/L
2-Chloroethylvinyl ether	<10.0	ug/L
Chloroform	<5.0	ug/L
Chloromethane	<10.0	ug/L
Dibromochloromethane	<5.0	ug/L
1,1-Dichloroethane	<5.0	ug/L
1,2-Dichloroethane	<5.0	ug/L
1,1-Dichloroethene	<5.0	ug/L
cis-1,2-Dichloroethene	<5.0	ug/L
trans-1,2-Dichloroethene	<5.0	ug/L
1,2-Dichloropropane	<5.0	ug/L
cis-1,3-Dichloropropene	<5.0	ug/L
trans-1,3-Dichloropropene	<5.0	ug/L
Ethylbenzene	<5.0	ug/L
2-Hexanone	<50.0	ug/L
Methylene chloride	<5.0	ug/L
4-Methyl-2-pentanone	<50.	ug/L
Styrene	<5.0	ug/L


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SAMPLE NO: 81121

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San Marcos Landfill

SAMPLE DESCRIPTION: MW-106

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

1,1,2,2-Tetrachloroethane	<5.0	ug/L
Tetrachloroethene	<5.0	ug/L
Toluene	<5.0	ug/L
1,1,1-Trichloroethane	<5.0	ug/L
1,1,2-Trichloroethane	<5.0	ug/L
Trichloroethene	<5.0	ug/L
Trichlorofluoromethane	<5.0	ug/L
Vinyl acetate	<50.0	ug/L
Vinyl chloride	<10.0	ug/L
Xylenes	<5.0	ug/L


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08/17/1992

JOB NO: 92.1729
SAMPLE NO: 81067

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: MW-107

Date Taken: 07/16/1992

Date Received: 07/17/1992

Alkalinity, bicarb (CACO3)	282.	mg/L
Alkalinity, carbonate (CACO	<1.	mg/L
Alkalinity, phenol (CACO3)	<1.	mg/L
Alkalinity, total (CACO3)	282.	mg/L
Anion/Cation Balance	3.44	% Error
Chloride	28.	mg/L
Fluoride	0.4	mg/L
Hardness, Total	272.	mg/L
N-Nitrate	9.6	mg/L
pH	7.0	units
Solids, Total Dissolved	495.	mg/L
Specific Conductance	795.	umhos/cm
Sulfate, Turbidimetric	110.	mg/L
Total Organic Carbon (W) a	1.	mg/L
Total Organic Carbon (W) b	1.	mg/L
Total Organic Carbon (W) c	1.	mg/L
Total Organic Carbon (W) d	1.	mg/L
Calcium, AA	100.	mg/L
Iron, AA	0.10	mg/L
Magnesium, AA	9.	mg/L
Manganese, AA	0.02	mg/L
Potassium, AA	22.	mg/L
Sodium, AA	70.	mg/L


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SAMPLE NO: 81067

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: MW-107

Date Taken: 07/16/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

Acetone	<100.	ug/L
Acrolein	<10.0	ug/L
Acrylonitrile	<10.0	ug/L
Benzene	<5.0	ug/L
Bromodichloromethane	<5.0	ug/L
Bromoform	<5.0	ug/L
Bromomethane	<10.0	ug/L
2-Butanone	<100.	ug/L
Carbon disulfide	<5.0	ug/L
Carbon tetrachloride	<5.0	ug/L
Chlorobenzene	<5.0	ug/L
Chloroethane	<10.0	ug/L
2-Chloroethylvinyl ether	<10.0	ug/L
Chloroform	<5.0	ug/L
Chloromethane	<10.0	ug/L
Dibromochloromethane	<5.0	ug/L
1,1-Dichloroethane	<5.0	ug/L
1,2-Dichloroethane	<5.0	ug/L
1,1-Dichloroethene	<5.0	ug/L
cis-1,2-Dichloroethene	<5.0	ug/L
trans-1,2-Dichloroethene	<5.0	ug/L
1,2-Dichloropropane	<5.0	ug/L
cis-1,3-Dichloropropene	<5.0	ug/L
trans-1,3-Dichloropropene	<5.0	ug/L
Ethylbenzene	<5.0	ug/L
2-Hexanone	<50.0	ug/L
Methylene chloride	<5.0	ug/L
4-Methyl-2-pentanone	<50.	ug/L
Styrene	<5.0	ug/L


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90-3135-5
San Marcos Landfill


SAMPLE DESCRIPTION: MW-107

Date Taken: 07/16/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

1,1,2,2-Tetrachloroethane	<5.0	ug/L
Tetrachloroethene	<5.0	ug/L
Toluene	<5.0	ug/L
1,1,1-Trichloroethane	<5.0	ug/L
1,1,2-Trichloroethane	<5.0	ug/L
Trichloroethene	<5.0	ug/L
Trichlorofluoromethane	<5.0	ug/L
Vinyl acetate	<50.0	ug/L
Vinyl chloride	<10.0	ug/L
Xylenes	<5.0	ug/L


Pam Jupe, Manager
Austin Division





NATIONAL
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NET Gulf Coast Inc.
Austin Division
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ANALYTICAL REPORT

Doug Frick
McCULLEY, FRICK & GILMAN, INC.
5818 Balcones Drive
Suite 202
Austin, TX 78731

07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81123

90-3135-5
San Marcos Landfill

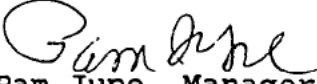
SAMPLE DESCRIPTION: (b) (6) Well

Date Taken: 07/17/1992

Date Received: 07/17/1992

Chloride	30.	mg/L
pH	7.2 ^	units
Solids, Total Dissolved	346.	mg/L
Specific Conductance	513.	umhos/cm

^ Sample analyzed beyond holding time for parameter.


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07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81123

90-3135-5
San Marcos Landfill

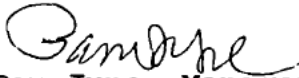
SAMPLE DESCRIPTION: (b) (6) Well

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

Acetone	<100.	ug/L
Acrolein	<10.0	ug/L
Acrylonitrile	<10.0	ug/L
Benzene	<5.0	ug/L
Bromodichloromethane	<5.0	ug/L
Bromoform	<5.0	ug/L
Bromomethane	<10.0	ug/L
2-Butanone	<100.	ug/L
Carbon disulfide	<5.0	ug/L
Carbon tetrachloride	<5.0	ug/L
Chlorobenzene	<5.0	ug/L
Chloroethane	<10.0	ug/L
2-Chloroethylvinyl ether	<10.0	ug/L
Chloroform	<5.0	ug/L
Chloromethane	<10.0	ug/L
Dibromochloromethane	<5.0	ug/L
1,1-Dichloroethane	<5.0	ug/L
1,2-Dichloroethane	<5.0	ug/L
1,1-Dichloroethene	<5.0	ug/L
cis-1,2-Dichloroethene	<5.0	ug/L
trans-1,2-Dichloroethene	<5.0	ug/L
1,2-Dichloropropane	<5.0	ug/L
cis-1,3-Dichloropropene	<5.0	ug/L
trans-1,3-Dichloropropene	<5.0	ug/L
Ethylbenzene	<5.0	ug/L
2-Hexanone	<50.0	ug/L
Methylene chloride	<5.0	ug/L
4-Methyl-2-pentanone	<50.	ug/L
Styrene	<5.0	ug/L


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07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81123

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: (b) (6) Well

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS		
1,1,2,2-Tetrachloroethane	<5.0	ug/L
Tetrachloroethene	<5.0	ug/L
Toluene	<5.0	ug/L
1,1,1-Trichloroethane	<5.0	ug/L
1,1,2-Trichloroethane	<5.0	ug/L
Trichloroethene	<5.0	ug/L
Trichlorofluoromethane	<5.0	ug/L
Vinyl acetate	<50.0	ug/L
Vinyl chloride	<10.0	ug/L
Xylenes	<5.0	ug/L

Pam Jupe
Pam Jupe, Manager
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ANALYTICAL REPORT

Doug Frick
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07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81124

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: (b) (6) TX BS

Date Taken: 07/17/1992

Date Received: 07/17/1992

Chloride	200.	mg/L
pH	7.0 ^	units
Solids, Total Dissolved	768.	mg/L
Specific Conductance	1,250.	umhos/cm

^ Sample analyzed beyond holding time for parameter.

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ANALYTICAL REPORT

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07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81124

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: (b) (6) TX BS

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

Acetone	<100.	ug/L
Acrolein	<10.0	ug/L
Acrylonitrile	<10.0	ug/L
Benzene	<5.0	ug/L
Bromodichloromethane	<5.0	ug/L
Bromoform	<5.0	ug/L
Bromomethane	<10.0	ug/L
2-Butanone	<100.	ug/L
Carbon disulfide	<5.0	ug/L
Carbon tetrachloride	<5.0	ug/L
Chlorobenzene	<5.0	ug/L
Chloroethane	<10.0	ug/L
2-Chloroethylvinyl ether	<10.0	ug/L
Chloroform	<5.0	ug/L
Chloromethane	<10.0	ug/L
Dibromochloromethane	<5.0	ug/L
1,1-Dichloroethane	<5.0	ug/L
1,2-Dichloroethane	<5.0	ug/L
1,1-Dichloroethene	<5.0	ug/L
cis-1,2-Dichloroethene	<5.0	ug/L
trans-1,2-Dichloroethene	<5.0	ug/L
1,2-Dichloropropane	<5.0	ug/L
cis-1,3-Dichloropropene	<5.0	ug/L
trans-1,3-Dichloropropene	<5.0	ug/L
Ethylbenzene	<5.0	ug/L
2-Hexanone	<50.0	ug/L
Methylene chloride	<5.0	ug/L
4-Methyl-2-pentanone	<50.	ug/L
Styrene	<5.0	ug/L


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07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81124

90-3135-5
San Marcos Landfill


SAMPLE DESCRIPTION: (b) (6) TX BS

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

1,1,2,2-Tetrachloroethane	<5.0	ug/L
Tetrachloroethene	<5.0	ug/L
Toluene	<5.0	ug/L
1,1,1-Trichloroethane	<5.0	ug/L
1,1,2-Trichloroethane	<5.0	ug/L
Trichloroethene	<5.0	ug/L
Trichlorofluoromethane	<5.0	ug/L
Vinyl acetate	<50.0	ug/L
Vinyl chloride	<10.0	ug/L
Xylenes	<5.0	ug/L


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ANALYTICAL REPORT

Doug Frick
McCULLEY, FRICK & GILMAN, INC.
5818 Balcones Drive
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07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81125

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION:

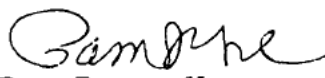
(b) (6)

Date Taken: 07/17/1992

Date Received: 07/17/1992

Chloride	124.	mg/L
pH	6.7 ^	units
Solids, Total Dissolved	751.	mg/L
Specific Conductance	1,110.	umhos/cm

^ Sample analyzed beyond holding time for parameter.


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07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81125

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION:


(b) (6)

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

Acetone	<100.	ug/L
Acrolein	<10.0	ug/L
Acrylonitrile	<10.0	ug/L
Benzene	<5.0	ug/L
Bromodichloromethane	<5.0	ug/L
Bromoform	<5.0	ug/L
Bromomethane	<10.0	ug/L
2-Butanone	<100.	ug/L
Carbon disulfide	<5.0	ug/L
Carbon tetrachloride	<5.0	ug/L
Chlorobenzene	<5.0	ug/L
Chloroethane	<10.0	ug/L
2-Chloroethylvinyl ether	<10.0	ug/L
Chloroform	<5.0	ug/L
Chloromethane	<10.0	ug/L
Dibromochloromethane	<5.0	ug/L
1,1-Dichloroethane	<5.0	ug/L
1,2-Dichloroethane	<5.0	ug/L
1,1-Dichloroethene	<5.0	ug/L
cis-1,2-Dichloroethene	<5.0	ug/L
trans-1,2-Dichloroethene	<5.0	ug/L
1,2-Dichloropropane	<5.0	ug/L
cis-1,3-Dichloropropene	<5.0	ug/L
trans-1,3-Dichloropropene	<5.0	ug/L
Ethylbenzene	<5.0	ug/L
2-Hexanone	<50.0	ug/L
Methylene chloride	<5.0	ug/L
4-Methyl-2-pentanone	<50.	ug/L
Styrene	<5.0	ug/L


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07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81125

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION:

(b) (6)

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

1,1,2,2-Tetrachloroethane	<5.0	ug/L
Tetrachloroethene	<5.0	ug/L
Toluene	<5.0	ug/L
1,1,1-Trichloroethane	<5.0	ug/L
1,1,2-Trichloroethane	<5.0	ug/L
Trichloroethene	<5.0	ug/L
Trichlorofluoromethane	<5.0	ug/L
Vinyl acetate	<50.0	ug/L
Vinyl chloride	<10.0	ug/L
Xylenes	<5.0	ug/L

Pam Jupe
Pam Jupe, Manager
Austin Division





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ANALYTICAL REPORT

Doug Frick
McCULLEY, FRICK & GILMAN, INC.
5818 Balcones Drive
Suite 202
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07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81126

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION:


(b) (6)

Date Taken: 07/17/1992

Date Received: 07/17/1992

Chloride	102.	mg/L
pH	6.8 ^	units
Solids, Total Dissolved	787.	mg/L
Specific Conductance	1,220.	umhos/cm

^ Sample analyzed beyond holding time for parameter.


Pam Jupe, Manager
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Doug Frick
McCULLEY, FRICK & GILMAN, INC.
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07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81126

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION:


(b) (6)

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

Acetone	<100.	ug/L
Acrolein	<10.0	ug/L
Acrylonitrile	<10.0	ug/L
Benzene	<5.0	ug/L
Bromodichloromethane	<5.0	ug/L
Bromoform	<5.0	ug/L
Bromomethane	<10.0	ug/L
2-Butanone	<100.	ug/L
Carbon disulfide	<5.0	ug/L
Carbon tetrachloride	<5.0	ug/L
Chlorobenzene	<5.0	ug/L
Chloroethane	<10.0	ug/L
2-Chloroethylvinyl ether	<10.0	ug/L
Chloroform	<5.0	ug/L
Chloromethane	<10.0	ug/L
Dibromochloromethane	<5.0	ug/L
1,1-Dichloroethane	<5.0	ug/L
1,2-Dichloroethane	<5.0	ug/L
1,1-Dichloroethene	<5.0	ug/L
cis-1,2-Dichloroethene	<5.0	ug/L
trans-1,2-Dichloroethene	<5.0	ug/L
1,2-Dichloropropane	<5.0	ug/L
cis-1,3-Dichloropropene	<5.0	ug/L
trans-1,3-Dichloropropene	<5.0	ug/L
Ethylbenzene	<5.0	ug/L
2-Hexanone	<50.0	ug/L
Methylene chloride	<5.0	ug/L
4-Methyl-2-pentanone	<50.	ug/L
Styrene	<5.0	ug/L


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07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81126

90-3135-5
San Marcos Landfill

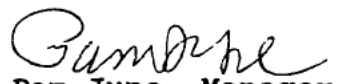
SAMPLE DESCRIPTION:

(b) (6)

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS		
1,1,2,2-Tetrachloroethane	<5.0	ug/L
Tetrachloroethene	<5.0	ug/L
Toluene	<5.0	ug/L
1,1,1-Trichloroethane	<5.0	ug/L
1,1,2-Trichloroethane	<5.0	ug/L
Trichloroethene	<5.0	ug/L
Trichlorofluoromethane	<5.0	ug/L
Vinyl acetate	<50.0	ug/L
Vinyl chloride	<10.0	ug/L
Xylenes	<5.0	ug/L


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07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81127

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: (b) (6) Pecan Grove

Date Taken: 07/17/1992

Date Received: 07/17/1992

Chloride	14.	mg/L
pH	7.1 ^	units
Solids, Total Dissolved	559.	mg/L
Specific Conductance	684.	umhos/cm

^ Sample analyzed beyond holding time for parameter.

Pam Jupe
Pam Jupe, Manager
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07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81127

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: (b)(6) Pecan Grove

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

Acetone	<100.	ug/L
Acrolein	<10.0	ug/L
Acrylonitrile	<10.0	ug/L
Benzene	<5.0	ug/L
Bromodichloromethane	<5.0	ug/L
Bromoform	<5.0	ug/L
Bromomethane	<10.0	ug/L
2-Butanone	<100.	ug/L
Carbon disulfide	<5.0	ug/L
Carbon tetrachloride	<5.0	ug/L
Chlorobenzene	<5.0	ug/L
Chloroethane	<10.0	ug/L
2-Chloroethylvinyl ether	<10.0	ug/L
Chloroform	<5.0	ug/L
Chloromethane	<10.0	ug/L
Dibromochloromethane	<5.0	ug/L
1,1-Dichloroethane	<5.0	ug/L
1,2-Dichloroethane	<5.0	ug/L
1,1-Dichloroethene	<5.0	ug/L
cis-1,2-Dichloroethene	<5.0	ug/L
trans-1,2-Dichloroethene	<5.0	ug/L
1,2-Dichloropropane	<5.0	ug/L
cis-1,3-Dichloropropene	<5.0	ug/L
trans-1,3-Dichloropropene	<5.0	ug/L
Ethylbenzene	<5.0	ug/L
2-Hexanone	<50.0	ug/L
Methylene chloride	<5.0	ug/L
4-Methyl-2-pentanone	<50.	ug/L
Styrene	<5.0	ug/L

Gambrine
Pam Jupe, Manager
Austin Division





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07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81127

90-3135-5
San Marcos Landfill


SAMPLE DESCRIPTION: (b) (6) Pecan Grove

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

1,1,2,2-Tetrachloroethane	<5.0	ug/L
Tetrachloroethene	<5.0	ug/L
Toluene	<5.0	ug/L
1,1,1-Trichloroethane	<5.0	ug/L
1,1,2-Trichloroethane	<5.0	ug/L
Trichloroethene	<5.0	ug/L
Trichlorofluoromethane	<5.0	ug/L
Vinyl acetate	<50.0	ug/L
Vinyl chloride	<10.0	ug/L
Xylenes	<5.0	ug/L


Pam Jupe, Manager
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07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81128

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: (b) (6) Residence

Date Taken: 07/17/1992

Date Received: 07/17/1992

Chloride	18.	mg/L
pH	7.1 ^	units
Solids, Total Dissolved	549.	mg/L
Specific Conductance	828.	umhos/cm

^ Sample analyzed beyond holding time for parameter.

Gambrine
Pam Jupe, Manager
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07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81128

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: (b) (6) Residence

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

Acetone	<100.	ug/L
Acrolein	<10.0	ug/L
Acrylonitrile	<10.0	ug/L
Benzene	<5.0	ug/L
Bromodichloromethane	<5.0	ug/L
Bromoform	<5.0	ug/L
Bromomethane	<10.0	ug/L
2-Butanone	<100.	ug/L
Carbon disulfide	<5.0	ug/L
Carbon tetrachloride	<5.0	ug/L
Chlorobenzene	<5.0	ug/L
Chloroethane	<10.0	ug/L
2-Chloroethylvinyl ether	<10.0	ug/L
Chloroform	<5.0	ug/L
Chloromethane	<10.0	ug/L
Dibromochloromethane	<5.0	ug/L
1,1-Dichloroethane	<5.0	ug/L
1,2-Dichloroethane	<5.0	ug/L
1,1-Dichloroethene	<5.0	ug/L
cis-1,2-Dichloroethene	<5.0	ug/L
trans-1,2-Dichloroethene	<5.0	ug/L
1,2-Dichloropropane	<5.0	ug/L
cis-1,3-Dichloropropene	<5.0	ug/L
trans-1,3-Dichloropropene	<5.0	ug/L
Ethylbenzene	<5.0	ug/L
2-Hexanone	<50.0	ug/L
Methylene chloride	<5.0	ug/L
4-Methyl-2-pentanone	<50.	ug/L
Styrene	<5.0	ug/L


Pam Jupe, Manager
Austin Division





NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Gulf Coast Inc.
Austin Division
2621 Ridgepoint Drive, Suite 130
Austin, TX 78754

Tel: (512) 928-8905
Fax: (512) 928-3208

ANALYTICAL REPORT

Doug Frick
McCULLEY, FRICK & GILMAN, INC.
5818 Balcones Drive
Suite 202
Austin, TX 78731

07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81128

90-3135-5
San Marcos Landfill

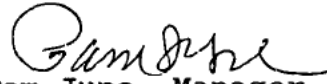
SAMPLE DESCRIPTION: (b) (6) Residence

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

1,1,2,2-Tetrachloroethane	<5.0	ug/L
Tetrachloroethene	<5.0	ug/L
Toluene	<5.0	ug/L
1,1,1-Trichloroethane	<5.0	ug/L
1,1,2-Trichloroethane	<5.0	ug/L
Trichloroethene	<5.0	ug/L
Trichlorofluoromethane	<5.0	ug/L
Vinyl acetate	<50.0	ug/L
Vinyl chloride	<10.0	ug/L
Xylenes	<5.0	ug/L


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ANALYTICAL REPORT

Doug Frick
McCULLEY, FRICK & GILMAN, INC.
5818 Balcones Drive
Suite 202
Austin, TX 78731

07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81129

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION:

(b) (6)

Date Taken: 07/17/1992

Date Received: 07/17/1992

Chloride	30.	mg/L
pH	7.0 ^	units
Solids, Total Dissolved	563.	mg/L
Specific Conductance	1,010.	umhos/cm

^ Sample analyzed beyond holding time for parameter.

Pam Jupe
Pam Jupe, Manager
Austin Division





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ANALYTICAL REPORT

Doug Frick
McCULLEY, FRICK & GILMAN, INC.
5818 Balcones Drive
Suite 202
Austin, TX 78731

07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81129

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION:

(b) (6)

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

Acetone	<100.	ug/L
Acrolein	<10.0	ug/L
Acrylonitrile	<10.0	ug/L
Benzene	<5.0	ug/L
Bromodichloromethane	<5.0	ug/L
Bromoform	<5.0	ug/L
Bromomethane	<10.0	ug/L
2-Butanone	<100.	ug/L
Carbon disulfide	<5.0	ug/L
Carbon tetrachloride	<5.0	ug/L
Chlorobenzene	<5.0	ug/L
Chloroethane	<10.0	ug/L
2-Chloroethylvinyl ether	<10.0	ug/L
Chloroform	<5.0	ug/L
Chloromethane	<10.0	ug/L
Dibromochloromethane	<5.0	ug/L
1,1-Dichloroethane	<5.0	ug/L
1,2-Dichloroethane	<5.0	ug/L
1,1-Dichloroethene	<5.0	ug/L
cis-1,2-Dichloroethene	<5.0	ug/L
trans-1,2-Dichloroethene	<5.0	ug/L
1,2-Dichloropropane	<5.0	ug/L
cis-1,3-Dichloropropene	<5.0	ug/L
trans-1,3-Dichloropropene	<5.0	ug/L
Ethylbenzene	<5.0	ug/L
2-Hexanone	<50.0	ug/L
Methylene chloride	<5.0	ug/L
4-Methyl-2-pentanone	<50.	ug/L
Styrene	<5.0	ug/L

Pam Jupe
Pam Jupe, Manager
Austin Division





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ANALYTICAL REPORT

Doug Frick
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5818 Balcones Drive
Suite 202
Austin, TX 78731

07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81129

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION:

(b) (6)

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

1,1,2,2-Tetrachloroethane	<5.0	ug/L
Tetrachloroethene	<5.0	ug/L
Toluene	<5.0	ug/L
1,1,1-Trichloroethane	<5.0	ug/L
1,1,2-Trichloroethane	<5.0	ug/L
Trichloroethene	<5.0	ug/L
Trichlorofluoromethane	<5.0	ug/L
Vinyl acetate	<50.0	ug/L
Vinyl chloride	<10.0	ug/L
Xylenes	<5.0	ug/L

Pam Jupe
Pam Jupe, Manager
Austin Division





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ANALYTICAL REPORT

Doug Frick
McCULLEY, FRICK & GILMAN, INC.
5818 Balcones Drive
Suite 202
Austin, TX 78731

08/17/1992

JOB NO: 92.1729
SAMPLE NO: 81068

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: Field Blank

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

Acetone	<100.	ug/L
Acrolein	<10.0	ug/L
Acrylonitrile	<10.0	ug/L
Benzene	<5.0	ug/L
Bromodichloromethane	<5.0	ug/L
Bromoform	<5.0	ug/L
Bromomethane	<10.0	ug/L
2-Butanone	<100.	ug/L
Carbon disulfide	<5.0	ug/L
Carbon tetrachloride	<5.0	ug/L
Chlorobenzene	<5.0	ug/L
Chloroethane	<10.0	ug/L
2-Chloroethylvinyl ether	<10.0	ug/L
Chloroform	<5.0	ug/L
Chloromethane	<10.0	ug/L
Dibromochloromethane	<5.0	ug/L
1,1-Dichloroethane	<5.0	ug/L
1,2-Dichloroethane	<5.0	ug/L
1,1-Dichloroethene	<5.0	ug/L
cis-1,2-Dichloroethene	<5.0	ug/L
trans-1,2-Dichloroethene	<5.0	ug/L
1,2-Dichloropropane	<5.0	ug/L
cis-1,3-Dichloropropene	<5.0	ug/L
trans-1,3-Dichloropropene	<5.0	ug/L
Ethylbenzene	<5.0	ug/L
2-Hexanone	<50.0	ug/L
Methylene chloride	<5.0	ug/L
4-Methyl-2-pentanone	<50.	ug/L
Styrene	<5.0	ug/L

Pam Jupe
Pam Jupe, Manager
Austin Division





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Austin, TX 78731

08/17/1992

JOB NO: 92.1729
SAMPLE NO: 81068

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: Field Blank

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

1,1,2,2-Tetrachloroethane	<5.0	ug/L
Tetrachloroethene	<5.0	ug/L
Toluene	<5.0	ug/L
1,1,1-Trichloroethane	<5.0	ug/L
1,1,2-Trichloroethane	<5.0	ug/L
Trichloroethene	<5.0	ug/L
Trichlorofluoromethane	<5.0	ug/L
Vinyl acetate	<50.0	ug/L
Vinyl chloride	<10.0	ug/L
Xylenes	<5.0	ug/L

Pam Jupe
Pam Jupe, Manager
Austin Division





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ANALYTICAL REPORT

Doug Frick
McCULLEY, FRICK & GILMAN, INC.
5818 Balcones Drive
Suite 202
Austin, TX 78731

07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81130

90-3135-5
San Marcos Landfill

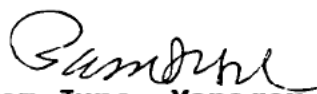
SAMPLE DESCRIPTION: MW-106 (duplicate)

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

Acetone	<100.	ug/L
Acrolein	<10.0	ug/L
Acrylonitrile	<10.0	ug/L
Benzene	<5.0	ug/L
Bromodichloromethane	<5.0	ug/L
Bromoform	<5.0	ug/L
Bromomethane	<10.0	ug/L
2-Butanone	<100.	ug/L
Carbon disulfide	<5.0	ug/L
Carbon tetrachloride	<5.0	ug/L
Chlorobenzene	<5.0	ug/L
Chloroethane	<10.0	ug/L
2-Chloroethylvinyl ether	<10.0	ug/L
Chloroform	<5.0	ug/L
Chloromethane	<10.0	ug/L
Dibromochloromethane	<5.0	ug/L
1,1-Dichloroethane	<5.0	ug/L
1,2-Dichloroethane	<5.0	ug/L
1,1-Dichloroethene	<5.0	ug/L
cis-1,2-Dichloroethene	<5.0	ug/L
trans-1,2-Dichloroethene	<5.0	ug/L
1,2-Dichloropropane	<5.0	ug/L
cis-1,3-Dichloropropene	<5.0	ug/L
trans-1,3-Dichloropropene	<5.0	ug/L
Ethylbenzene	<5.0	ug/L
2-Hexanone	<50.0	ug/L
Methylene chloride	<5.0	ug/L
4-Methyl-2-pentanone	<50.	ug/L
Styrene	<5.0	ug/L


Pam Jupe, Manager
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ANALYTICAL REPORT

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07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81130

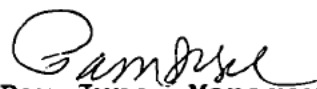
90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: MW-106 (duplicate)

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS		
1,1,2,2-Tetrachloroethane	<5.0	ug/L
Tetrachloroethene	<5.0	ug/L
Toluene	<5.0	ug/L
1,1,1-Trichloroethane	<5.0	ug/L
1,1,2-Trichloroethane	<5.0	ug/L
Trichloroethene	<5.0	ug/L
Trichlorofluoromethane	<5.0	ug/L
Vinyl acetate	<50.0	ug/L
Vinyl chloride	<10.0	ug/L
Xylenes	<5.0	ug/L


Pam Jupe, Manager
Austin Division



CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

McCULLY, FRICK & GILMAN, INC.

NO. 90-3135-5

☐ 3300 Arapahoe Ave., Suite 218
Boulder, CO 80303
TEL: (303) 447-1823
FAX: (303) 447-1836

☒ 5818 Balcones Dr., Suite 202
Austin, TX 78731
TEL: (512) 371-1667
FAX: (512) 454-4126

☐ 5 Third St., Suite 916
San Francisco, CA 94103
TEL: (415) 495-7110
FAX: (415) 495-7107

PROJECT No.: 90-3135 PROJECT NAME: San Marcos Landfill PAGE: 1 OF: 3
SAMPLER (Signature): [Signature] DATE: 7-17-92
METHOD OF SHIPMENT: HAND DELIVER CARRIER/ WAYBILL NO.: TMS/MFG DESTINATION: NET Austin
SPECIAL INSTRUCTIONS/HAZARDS: Comprehensive QA/QC

SAMPLES

ANALYSIS REQUEST

Lab No.	Sample Identification	Sample Collection		Matrix*	Preservation						Containers*			Methods										Handling			REMARKS (Special handling procedures, specific analytical methods, observations, etc.)		
		DATE	TIME		HCL	HNO ₃	H ₂ SO ₄	COLD	NONE	OTHER	VOL. (ml)	TYPE*	No.	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	TPH as Gasoline	TPH as Diesel	BTEX	TOC	Metals	NO ₃	Gen Chem	HOLD	RUSH		STANDARD	
	MW-102	7/16/92	1305	AG				✓	✓		40	G	2			✓													
	"		"				✓	✓			250	G	4								✓								
	"		"			✓		✓			1000	P	1									✓							Field Filtered
	"		"					✓	✓		1000	P	1											✓					
	"		"				✓	✓			500	P	1											✓					
	MW-103		1400					✓	✓		40	G	2			✓													
	"		"				✓	✓			250	G	4								✓								
	"		"			✓		✓			1000	P	1									✓							Field Filtered
	"		"					✓	✓		1000	P	1											✓					
	"		"				✓	✓			500	P	1											✓					

TOTAL NUMBER OF CONTAINERS

18

LABORATORY COMMENTS/ CONDITION OF SAMPLES

RELINQUISHED BY:

DATE

TIME

RECEIVED BY:

SIGNATURE

PRINTED NAME

COMPANY

SIGNATURE

PRINTED NAME

COMPANY

7-17-92

8:45

M. Jaramilla

M. Jaramilla

NET, Inc.

LABORATORY

*KEY: Matrix AO-aqueous NA-non-aqueous SO-soil SL-sludge P-petroleum A-air OT-other

Containers P-plastic G-glass T-terlon B-brass OT-other

DISTRIBUTION: PINK: Field Copy YELLOW: Laboratory Copy WHITE: Return to Originator

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

McCULLEY, FRICK & GILMAN, INC.

NO. 90-3135-5

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Boulder, CO 80303
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☐ 5 Third St., Suite 916
San Francisco, CA 94103
TEL: (415) 495-7110
FAX: (415) 495-7107

PROJECT No.: 90-3135 PROJECT NAME: San Marcos Landfill PAGE: 2 OF: 3
SAMPLER (Signature): Jimmy M. Sarmiento DATE: 7-17-92
METHOD OF SHIPMENT: HAND DELIVER CARRIER/WAYBILL NO.: TMS/MFG DESTINATION: NET Austin
SPECIAL INSTRUCTIONS/HAZARDS: Comprehensive QA/QC

SAMPLES												ANALYSIS REQUEST																	
Lab No.	Sample Identification	Sample Collection		Matrix*	Preservation						Containers*			Methods										Handling			REMARKS (Special handling procedures, specific analytical methods, observations, etc.)		
		DATE	TIME		HCL	HNO ₃	H ₂ SO ₄	COLD	NONE	OTHER	VOL. (ml)	TYPE*	No.	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	TPH as Gasoline	TPH as Diesel	BTEX	TOC	Metals	NO ₃	Gravel	HOLD	RUSH		STANDARD	
	MW-104	7/14/92	1020	AQ				✓	✓		40	G	2			✓													
	MW-104		"				✓	✓			250	G	4								✓								
	"		"			✓		✓			1000	P	1								✓								Field Filtered
	"		"					✓	✓		1000	P	1											✓					
	"		"			✓	✓	✓			500	P	1									✓							
	MW-105		1127					✓	✓		40	G	2			✓													
	"		"				✓	✓			250	G	4							✓									
	"		"			✓		✓			1000	P	1								✓								Field Filtered
	"		"					✓	✓		1000	P	1											✓					
	"		"				✓	✓			500	P	1									✓							
TOTAL NUMBER OF CONTAINERS												18																	
												LABORATORY COMMENTS/ CONDITION OF SAMPLES																	

RELINQUISHED BY:				DATE	TIME	RECEIVED BY:		
SIGNATURE	PRINTED NAME	COMPANY				SIGNATURE	PRINTED NAME	COMPANY
<u>Jimmy M. Sarmiento</u>	<u>T.M. Sarmiento</u>	<u>MFG</u>		<u>7-17-92</u>		<u>M. Jaramilla</u>	<u>M. Jaramilla</u>	<u>NET, Inc.</u>

*KEY: Matrix AO-aqueous NA-non-aqueous SO-soil SL-sludge P-petroleum A-air OT-other Containers P-plastic G-glass T-terlon B-brass OT-other

DISTRIBUTION: PINK: Field Copy YELLOW: Laboratory Copy WHITE: Return to Originator

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

McCULLEY, FRICK & GILMAN, INC.

NO. 90-3135-5

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FAX: (512) 454-4126

☐ 5 Third St., Suite 916
San Francisco, CA 94103
TEL: (415) 495-7110
FAX: (415) 495-7107

PROJECT No.: 90-3135 -PROJECT NAME: San Marcos Landfill PAGE: 3 OF: 3
SAMPLER (Signature): Jimmy M. Frank DATE: 7-17-92
METHOD OF SHIPMENT: HAND DELIVER CARRIER/ WAYBILL NO.: MF8 DESTINATION: NET Austin
SPECIAL INSTRUCTIONS/HAZARDS: Comprehensive QA/QC

SAMPLES

ANALYSIS REQUEST

Lab No.	Sample Identification	Sample Collection		Matrix*	Preservation						Containers*			Methods										Handling			REMARKS (Special handling procedures, specific analytical methods, observations, etc.)		
		DATE	TIME		HCL	HNO ₃	H ₂ SO ₄	COLD	NONE	OTHER	VOL. (ml)	TYPE*	No.	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	TPH as Gasoline	TPH as Diesel	BTEX	TOC	Metals	NO ₃	Gen Chem	HOLD	RUSH		STANDARD	
	MW-107	7/17/92	1500	AQ				✓	✓		40	G	2			✓													
	"	"	"					✓	✓		250	G	4								✓								
	"	"	"			✓		✓			1000	P	1									✓							Field Filtered
	"	"	"					✓	✓		1000	P	1											✓					
	"	"	"					✓	✓		500	P	1										✓						
	Field Blank	7/17/92	0900					✓	✓		40	G	2			✓													STORE D.I. WATER
	* Trip Blank				✓			✓			40	G	2			✓													LAB WATER @ HCL
	Cell Doug Frick @ Analysis for Trip Blank @ HCL TWC Split																												
	Samples were not preserved @ HCL																												
TOTAL NUMBER OF CONTAINERS													LABORATORY COMMENTS/ CONDITION OF SAMPLES																

RELINQUISHED BY:

DATE

TIME

RECEIVED BY:

SIGNATURE

PRINTED NAME

COMPANY

SIGNATURE

PRINTED NAME

COMPANY

LABORATORY

*KEY: Matrix AQ-aqueous NA-nonaqueous SO-soil SL-sludge P-petroleum A-air OT-other

Containers P-plastic G-glass T-terlon B-brass OT-other

DISTRIBUTION: PINK: Field Copy YELLOW: Laboratory Copy WHITE: Return to Originator

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

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NO. 90-3135-5

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San Francisco, CA 94103
TEL: (415) 495-7110
FAX: (415) 495-7107

PROJECT No.: 90-3135 PROJECT NAME: San Marcos Landfill PAGE: 1 OF: 3
SAMPLER (Signature): Timothy M. Scaula DATE: 7-17-92
METHOD OF SHIPMENT: HAND DELIVER CARRIER/WAYBILL NO.: TMS/MFG DESTINATION: NET Austin
SPECIAL INSTRUCTIONS/HAZARDS: Comprehensive QA/QC

SAMPLES											ANALYSIS REQUEST																		
Lab No.	Sample Identification	Sample Collection		Matrix*	Preservation						Containers*			Methods								Handling			REMARKS (Special handling procedures, specific analytical methods, observations, etc.)				
		DATE	TIME		HCL	HNO ₃	H ₂ SO ₄	COLD	NONE	OTHER	VOL. (ml)	TYPE*	No.	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	TPH as Gasoline	TPH as Diesel	BTEX	Gen Chem	TOL	Metals	NO ₃		HOLD	RUSH	STANDARD	
	MW-106	7/17/92	1030	AG				✓	✓		40	G	2			✓													
	"		"				✓	✓			250	G	4									✓							
	"		"			✓		✓			1000	P	1										✓						
	"		"					✓	✓		1000	P	1								✓								
	"		"				✓	✓			500	P	1											✓					
	MW-101		1140					✓	✓		40	G	2			✓													
	"		"				✓	✓			250	G	4									✓							
	"		"			✓		✓			1000	P	1										✓						
	"		"					✓	✓		1000	P	1								✓								
	"		"				✓	✓			500	P	1										✓						

TOTAL NUMBER OF CONTAINERS

LABORATORY COMMENTS/CONDITION OF SAMPLES

18

RELINQUISHED BY:				DATE	TIME	RECEIVED BY:		
SIGNATURE	PRINTED NAME	COMPANY				SIGNATURE	PRINTED NAME	COMPANY
<u>Timothy M. Scaula</u>	<u>T.M. Scaula</u>	<u>MFG</u>		<u>7/17/92</u>	<u>17:00</u>	<u>Debby Skogen</u>	<u>Debby Skogen</u>	<u>NET</u>

LABORATORY

*KEY: Matrix AO-aqueous NA-non-aqueous SO-soil SL-sludge P-petroleum A-air OT-other

Containers P-plastic G-glass T-terlon B-brass OT-other

DISTRIBUTION: PINK: Field Copy YELLOW: Laboratory Copy WHITE: Return to Originator

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

McCULLEY, FRICK & GILMAN, INC.

NO. 90-3135

☐ 3300 Arapahoe Ave., Suite 218
Boulder, CO 80303
TEL: (303) 447-1823
FAX: (303) 447-1836

☒ 5818 Balcones Dr., Suite 202
Austin, TX 78731
TEL: (512) 371-1667
FAX: (512) 454-4126

☐ 5 Third St., Suite 916
San Francisco, CA 94103
TEL: (415) 495-7110
FAX: (415) 495-7107

PROJECT No.: 90-3135 PROJECT NAME: San Marcos Landfill PAGE: 2 OF: 3
SAMPLER (Signature): Timothy M. Frank DATE: 7-17-92
METHOD OF SHIPMENT: HAND DELIVER CARRIER/ WAYBILL NO. TMS/MFG DESTINATION: NET Austin
SPECIAL INSTRUCTIONS/HAZARDS: Comprehensive QA/QC

SAMPLES											ANALYSIS REQUEST															
Lab No.	Sample Identification	Sample Collection		Matrix*	Preservation						Containers*			Methods						Handling			REMARKS (Special handling procedures, specific analytical methods, observations, etc.)			
		DATE	TIME		HCL	HNO ₃	H ₂ SO ₄	COLD	NONE	OTHER	VOL. (ml)	TYPE*	No.	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	TPH as Gasoline	TPH as Diesel	BTEX	Grav Chem	HOLD		RUSH	STANDARD	
	Kent Well	7/17/92	1230	AG				✓	✓		40	G	2			✓									X	
	"		"					✓	✓		1000	P	1							✓						
	T. Smith Jx BS		1305					✓	✓		40	G	2			✓										
	"		"					✓	✓		1000	P	1							✓						
	Victoria Alexis Salinas		1340					✓	✓		40	G	2			✓										
	"		"					✓	✓		1000	P	1							✓						
	Juan Salinas		1350					✓	✓		40	G	2			✓										
	"		"					✓	✓		1000	P	1							✓						
	Ellis Pecan Grove		1415					✓	✓		40	G	2			✓										
	"		"					✓	✓		1000	P	1							✓						

TOTAL NUMBER OF CONTAINERS

15

LABORATORY COMMENTS/ CONDITION OF SAMPLES

RELINQUISHED BY:				DATE		TIME		RECEIVED BY:		
SIGNATURE	PRINTED NAME	COMPANY						SIGNATURE	PRINTED NAME	COMPANY
<u>Timothy M. Frank</u>	<u>T.M. Frank</u>	<u>MFG</u>		<u>7-17-92</u>		<u>17:00</u>		<u>Debby Skogen</u>	<u>Debby Skogen</u>	<u>NET</u>

KEY: Matrix AQ-aqueous NA-nonaqueous SO-sol SL-sludge P-petroleum A-air OT-other

Containers P-plastic G-glass T-terlon B-brass OT-other

DISTRIBUTION: PINK: Field Copy YELLOW: Laboratory Copy WHITE: Return to Originator

NO. 90-3135-5

☐ 5 Third St., Suite 916
San Francisco, CA 94103
TEL: (415) 495-7110
FAX: (415) 495-7107

[illegible]

LABORATORY

DISTRIBUTION: PINK: Field Copy YELLOW Laboratory Copy WHITE: Return to Originator

GROUND-WATER SAMPLING RECORD

Page: 1 of 1

SAMPLE NUMBER:

MW-101

Project Number: 90-3135 Project Name: SAN MARCOS LANDFILL Date: 7-17-92
 Sampling Location (well ID, etc.): MW-101
 Sampled by: TMS/MFG
 Measuring Point (MP) of Well: TOC (PVC)
 Screened Interval (ft. BGL): 17.7-27.7
 Filter Pack Interval (ft. BGL): 14-28

Starting Water Level (ft. BMP): 21.04
 Casing Stickup (ft.): 1.8
 Starting Water Level (ft. BGL): —
 Total Depth (ft. BGL): 28.35
 Casing Diameter (In ID): 2"
 Casing Volume (gal.): 1.45

QUALITY ASSURANCE

METHODS (describe): Rinse with tap, scrub with non-phosphate soap, rinse, repeatCleaning Equipment: Distilled water rinse; disposable teflon bailers usedPurging: ~~Distilled water~~ Poly Bailer Sampling: Teflon bailerDisposal of Discharged Water: ~~Distilled water~~ GroundINSTRUMENTS (Indicate make, model, I.d.): pH* 9003002 Cond. * 16076Water Level: Olympic Well Probe #1 AusThermometer: Hg bulb/ATC ProbepH Meter: Cole Parmer 5938-10Field Calibration: 4, 7 & 10 pH BuffersConductivity Meter: YSI-SCI-33Field Calibration: 447 & 2070 μ mhoFiltration: .45 μ high capacity disposable

Other:

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics			Water Quality Data			Appearance		REMARKS
	Cumul.Vol. (gal.)	Purge Rate (gpm)	Temp. (°C)	pH	Specific Conductance (umhos/cm)		Color	Turbidity & Sediment	
					@Field Temp.	@25 C			
1120	1.5	—	22.4	6.64	—	3000	lt gray	Cloudy	minor sd / sed precip
1125	3.0	—	21.9	6.79	—	2920	lt gray	slightly cloudy	minor sd / sed
1130	4.5	—	21.9	6.78	—	2900	lt gray	slightly cloudy	minor sd / sed

Water Level (ft. BMP) at End of Purge: 25Sample Intake Depth (ft. BMP): 25.5

SAMPLE INVENTORY

Bottles Collected				Filtration (Y/N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume ml	Composition (glass, plastic)	Quantity			
1140	40	Glass	2	N	cold, none	VOC's
"	250	Amber Glass	4	N	cold, H ₂ SO ₄	TOC
"	1000	Plastic	1	Y	cold, HNO ₃	METALS
"	1000	Plastic	1	N	cold, none	GENERAL CHEMISTRY
"	500	Plastic	1	N	H ₂ SO ₄	NITRATE

Chain-of-Custody Record No. 90-3135-5

ABBREVIATIONS:

BMP - Below Measuring Point

BGL - Below Ground Level

Cumul. Vol - Cumulative Volume Removed

ID - Inside Diameter

C - Celsius

gal. - gallons

gpm - gallon per minute

In. - inches

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GROUND-WATER SAMPLING RECORD

Page: 1 of 1

SAMPLE NUMBER: MW-102Project Number: 90-3135Project Name: SAN MARCOS LANDFILLDate: 7/16/92Sampling Location (well ID, etc.): MW-102Sampled by: TMS/MFGMeasuring Point (MP) of Well: TOC (PVC)Screened Interval (ft. BGL): 16.2 - 26.2Filter Pack Interval (ft. BGL): 12.5 - 27.5Starting Water Level (ft. BMP): 15.68Casing Stickup (ft.): 2.4Starting Water Level (ft. BGL): —Total Depth (ft. BGL): 26.5Casing Diameter (in ID): 2"Casing Volume (gal.): 2.1

QUALITY ASSURANCE

METHODS (describe): Rinse with tap, scrub with non-phosphate soap, rinse, repeatCleaning Equipment: Distilled water rinse; disposable teflon bailers usedPurging: Teflon bailerSampling: Teflon bailerDisposal of Discharged Water: GroundINSTRUMENTS (Indicate make, model, I.d.): pH* 9003002 Cond.* 16076Water Level: Olympic Well Probe #1 AusThermometer: Hg bulb/ATC ProbepH Meter: Cole Parmer 5938-10Field Calibration: 4, 7 & 10 pH BuffersConductivity Meter: YSI-SCI-33Field Calibration: 447 & 2070 μ mhoFiltration: .45u high capacity disposableOther: —

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics			Water Quality Data			Appearance		REMARKS
	Cumul.Vol. (gal.)	Purge Rate (gpm)	Temp. (°C)	pH	Specific Conductance (µmhos/cm)		Color	Turbidity & Sediment	
					@Field Temp.	@25 C			
1242	2.1	—	23.3	6.70	—	2000	Clear	5: yellow tint	water foams on bailings; organic
1252	4.2	—	23.5	6.71	—	2000	Clear	"	odor. "
1256	6.3	—	22.3	6.68	—	2000	Clear	"	"

Water Level (ft. BMP) at End of Purge: 16Sample Intake Depth (ft. BMP): 20

SAMPLE INVENTORY

Bottles Collected				Filtration (Y/N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume ml	Composition (glass, plastic)	Quantity			
1305	40	Glass	2	N	cold, none	VOC's
	250	Amber Glass	4	N	cold, H ₂ SO ₄	TOC
	1000	Plastic	1	Y	cold, HNO ₃	METALS
	1000	Plastic	1	N	cold, none	GENERAL CHEMISTRY
✓	500	Plastic	1	N	H ₂ SO ₄	NITRATE

Chain-of-Custody Record No. 90-3135-5

ABBREVIATIONS:

BMP - Below Measuring Point

BGL - Below Ground Level

Cumul. Vol - Cumulative Volume Removed

ID - Inside Diameter

C - Celsius

gal. - gallons

gpm - gallon per minute

in. - inches

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GROUND-WATER SAMPLING RECORD

Page: 1 of 1

SAMPLE NUMBER: MW-103

Project Number: 90-3135 Project Name: SAN MARCOS LANDFILL Date: 7/16/92
 Sampling Location (well ID, etc.): MW-103
 Sampled by: TMS/MFG
 Measuring Point (MP) of Well: TOC (PVC)
 Screened Interval (ft. BGL): 18.3-28.3
 Filter Pack Interval (ft. BGL): 16.5-28.6

Starting Water Level (ft. BMP): 18.91
 Casing Stickup (ft.): 2.3
 Starting Water Level (ft. BGL):
 Total Depth (ft. BGL): 29.2
 Casing Diameter (in ID): 2"
 Casing Volume (gal.): 2

QUALITY ASSURANCE

METHODS (describe): Rinse with tap, scrub with non-phosphate soap, rinse, repeat

Cleaning Equipment: Distilled water rinse; disposable teflon bailers used

Purging: Teflon bailer Sampling: Teflon bailer

Disposal of Discharged Water: Ground

INSTRUMENTS (Indicate make, model, I.D.): pH* 9003002 Cond. * 16076

Water Level: Olympic Well Probe #1 Aus

Thermometer: Hg bulb/ATC Probe

pH Meter: Cole Parmer 5938-10

Field Calibration: 4, 7 & 10 pH Buffers

Conductivity Meter: YSI-SCI-33

Field Calibration: 447 & 2070 μ mhoFiltration: .45 μ high capacity disposable

Other:

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics			Water Quality Data			Appearance		REMARKS
	Cumul. Vol. (gal.)	Purge Rate (gpm)	Temp. (°C)	pH	Specific Conductance (µmhos/cm)		Color	Turbidity & Sediment	
					@Field Temp.	@25 C			
1345	2	—	24.5	6.48	—	2500	orange turb	sl cloudy	orange flocculate
1350	4	—	23.5	6.48	—	2550	colorless	clear	o.f. gone
1355	6	—	23.5	6.60	—	2550			

Water Level (ft. BMP) at End of Purge: 23

Sample Intake Depth (ft. BMP): 27

SAMPLE INVENTORY

Bottles Collected				Filtration (Y/N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume ml	Composition (glass, plastic)	Quantity			
1400	40	Glass	2	N	cold, none	VOC's
	250	Amber Glass	4	N	cold, H ₂ SO ₄	TOC
	1000	Plastic	1	Y	cold, HNO ₃	METALS
	1000	Plastic	1	N	cold, none	GENERAL CHEMISTRY
	500	Plastic	1	N	H ₂ SO ₄	NITRATE

Chain-of-Custody Record No. 90-3135-5

ABBREVIATIONS:

BMP - Below Measuring Point

BGL - Below Ground Level

Cumul. Vol - Cumulative Volume Removed

ID - Inside Diameter

C - Celsius

gal. - gallons

gpm - gallon per minute

in. - inches

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GROUND-WATER SAMPLING RECORD

Page: 1 of 1

SAMPLE NUMBER: MW-104

Project Number: 90-3135

Project Name: SAN MARCOS LANDFILL

Date: 7/16/92

Sampling Location (well ID, etc.): MW-104

Sampled by: TMS/MFG

Measuring Point (MP) of Well: TOC (PVC)

Screened Interval (ft. BGL): 23.5-33.5

Filter Pack Interval (ft. BGL): 20.2-33.8

Starting Water Level (ft. BMP): 20.28

Casing Stickup (ft.): 2.2

Starting Water Level (ft. BGL):

Total Depth (ft. BGL): 34.8

Casing Diameter (in ID): 2"

Casing Volume (gal.): 2.6

QUALITY ASSURANCE

METHODS (describe): Rinse with tap, scrub with non-phosphate soap, rinse, repeat

Cleaning Equipment: Distilled water rinse; disposable teflon bailers used

Purging: Teflon bailer

Sampling: Teflon bailer

Disposal of Discharged Water: Ground

INSTRUMENTS (Indicate make, model, I.D.): pH* 9003002

Cond. * 16076

Water Level: Olympic Well Probe #1 Aus

Thermometer: Hg bulb/ATC Probe

pH Meter: Cole Parmer 5938-10

Field Calibration: 4, 7 & 10 pH Buffers

Conductivity Meter: YSI-SCI-33

Field Calibration: 447 & 2070 µmho

Filtration: .45µ high capacity disposable

Other:

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics		Water Quality Data				Appearance		REMARKS
	Cumul.Vol. (gal.)	Purge Rate (gpm)	Temp. (°C)	pH	Specific Conductance (µmhos/cm)		Color	Turbidity & Sediment	
					@Field Temp.	@25 C			
7/16 1200	2.5	—	22.5	6.80	—	1030	Clear	Clear	to V.Sh cloudy
7/16 1205	5.0	—	22.3	6.92	—	1000	Clear	Clear	to Sh cloudy
7/16 1210	7.8	—	22.5	7.00	—	1000	Clear	Clear	" " "

Water Level (ft. BMP) at End of Purge: 20.8

Sample Intake Depth (ft. BMP): 25.0 BMP

SAMPLE INVENTORY

Bottles Collected				Filtration (Y/N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume ml	Composition (glass, plastic)	Quantity			
1220	40	Glass	2	N	cold, none	VOC's
1220	250	Amber Glass	4	N	cold, H ₂ SO ₄	TOC
1220	1000	Plastic	1	Y	cold, HNO ₃	METALS
1220	1000	Plastic	1	N	cold, none	GENERAL CHEMISTRY
1220	500	Plastic	1	N	H ₂ SO ₄	NITRATE

Chain-of-Custody Record No. 90-3135-5

ABBREVIATIONS:

BMP - Below Measuring Point

BGL - Below Ground Level

Cumul. Vol - Cumulative Volume Removed

ID - Inside Diameter

C - Celsius

gal. - gallons

gpm - gallon per minute

in. - inches

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GROUND-WATER SAMPLING RECORD

Page: 1 of 1

SAMPLE NUMBER:

MW-105

Project Number: 90-3135

Project Name:

SAN MARCOS LANDFILL

Date: 7-16-92

Sampling Location (well ID, etc.):

MW-105

Sampled by: TMS/MFG

Measuring Point (MP) of Well: TOC (PVC)

Screened Interval (ft. BGL): 16-26

Filter Pack Interval (ft. BGL): 14-26.5

Starting Water Level (ft. BMP): 21.88

Casing Stickup (ft.): 2.2

Starting Water Level (ft. BGL):

Total Depth (ft. BGL): 26.8

Casing Diameter (in ID): 2"

Casing Volume (gal.): 113

QUALITY ASSURANCE

METHODS (describe): Rinse with tap, scrub with non-phosphate soap, rinse, repeat

Cleaning Equipment: Distilled water rinse; disposable teflon bailers used

Purging: Teflon bailer

Sampling: Teflon bailer

Disposal of Discharged Water: Barrel at wellsite

INSTRUMENTS (Indicate make, model, I.D.): pH* 9003002 Cond. * 16076

Water Level: Olympic Well Probe #1 Aus

Thermometer: Hg bulb/ATC Probe

pH Meter: Cole Parmer 5938-10

Field Calibration: 4, 7 & 10 pH Buffers

Conductivity Meter: YSI-SCI-33

Field Calibration: 447 & 2070 μ mhoFiltration: .45 μ high capacity disposable

Other:

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics			Water Quality Data			Appearance		REMARKS
	Cumul.Vol. (gal.)	Purge Rate (gpm)	Temp. (°C)	pH	Specific Conductance (umhos/cm)		Color	Turbidity & Sediment	
					@Field Temp.	@25 C			
1110	1.25	—	22.8	6.68	—	7500	4 tan	turbid	
1117	2.5	—	22.8	6.74	—	7500	"	"	sulfurous odor
1124	3.5	—	21.3	6.69	—	7500	"	"	"

Water Level (ft. BMP) at End of Purge: 22.5

Sample Intake Depth (ft. BMP): 26

SAMPLE INVENTORY

Bottles Collected				Filtration (Y/N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume ml	Composition (glass, plastic)	Quantity			
1127	40	Glass	2	N	cold, none	VOC's
	250	Amber Glass	4	N	cold, H ₂ SO ₄	TOC
	1000	Plastic	1	Y	cold, HNO ₃	METALS
	1000	Plastic	1	N	cold, none	GENERAL CHEMISTRY
✓	500	Plastic	1	N	H ₂ SO ₄	NITRATE

Chain-of-Custody Record No. 90-3135-5

ABBREVIATIONS:

BMP - Below Measuring Point

BGL - Below Ground Level

Cumul. Vol - Cumulative Volume Removed

ID - Inside Diameter

C - Celsius

gal - gallons

gpm - gallon per minute

in. - inches

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GROUND-WATER SAMPLING RECORD

Page: 1 of 1

SAMPLE NUMBER: MW-106

Project Number: 90-3135

Project Name: SAN MARGOS LANDFILL

Date: 7/17/92

Sampling Location (well ID, etc.): MW-106

Sampled by: TMS/MFG

Measuring Point (MP) of Well: TOC (PVC)

Screened Interval (ft. BGL):

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 22.3

Casing Stickup (ft.): 2.0

Starting Water Level (ft. BGL):

Total Depth (ft. BGL): 33.06

Casing Diameter (in ID): 2"

Casing Volume (gal.): 2

QUALITY ASSURANCE

METHODS (describe): Rinse with tap, scrub with non-phosphate soap, rinse, repeat

Cleaning Equipment: Distilled water rinse; disposable teflon bailers used

Purging: Poly Bailer Sampling: Teflon bailer

Disposal of Discharged Water: Ground

INSTRUMENTS (Indicate make, model, I.d.): pH# 9003002 Cond. # 16076

Water Level: Olympic Well Probe #1 Aus

Thermometer: Hg bulb/ATC Probe

pH Meter: Cole Parmer 5938-10

Field Calibration: 4, 7 & 10 pH Buffers

Conductivity Meter: YSI-SCI-33

Field Calibration: 447 & 2070 µmho

Filtration: .45µ high capacity disposable

Other:

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics			Water Quality Data			Appearance		REMARKS
	Cumul. Vol. (gal.)	Purge Rate (gpm)	Temp. (°C)	pH	Specific Conductance (µmhos/cm)		Color	Turbidity & Sediment	
					@Field Temp.	@25 C			
1008	2	—	23.0	7.09	—	990	Clear	Clear	
1015	4	—	22.3	6.94	—	990	"	"	
1020	6	—	22.2	6.92	—	1000	Clear	Clear	
									Duplicate VOC @
									MW-106 7-17-92
									@ 1530

Water Level (ft. BMP) at End of Purge: 29

Sample intake Depth (ft. BMP): 30.25

SAMPLE INVENTORY

Bottles Collected				Filtration (Y/N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume ml	Composition (glass, plastic)	Quantity			
1030	40	Glass	2	N	cold, none	VOC's
"	250	Amber Glass	4	N	cold, H ₂ SO ₄	TOC
"	1000	Plastic	1	Y	cold, HNO ₃	METALS
"	1000	Plastic	1	N	cold, none	GENERAL CHEMISTRY
"	500	Plastic	1	N	H ₂ SO ₄	NITRATE

Chain-of-Custody Record No. 90-3135-5

ABBREVIATIONS:

BMP - Below Measuring Point

BGL - Below Ground Level

Cumul. Vol - Cumulative Volume Removed

ID - Inside Diameter

C - Celsius

gal. - gallons

gpm - gallon per minute

In. - inches

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GROUND-WATER SAMPLING RECORD

Page: 1 of 1

SAMPLE NUMBER: MW-107Project Number: 90-3135Project Name: SAN MARCOS LANDFILLDate: 7/16/92Sampling Location (well ID, etc.): MW-107Sampled by: TMS/MFGMeasuring Point (MP) of Well: TOC (PVC)Screened Interval (ft. BGL): 19-29Filter Pack Interval (ft. BGL): 16.8-29Starting Water Level (ft. BMP): 20.17Casing Stickup (ft.): 2.4Starting Water Level (ft. BGL): —Total Depth (ft. BGL): 29.8Casing Diameter (In ID): 2"Casing Volume (gal.): 1.9

QUALITY ASSURANCE

METHODS (describe): Rinse with tap, scrub with non-phosphate soap, rinse, repeatCleaning Equipment: Distilled water rinse; disposable teflon bailers usedPurging: Teflon bailerSampling: Teflon bailerDisposal of Discharged Water: GroundINSTRUMENTS (Indicate make, model, I.D.): pH* 9003002 Cond. * 16076Water Level: Olympic Well Probe #1 AusThermometer: Hg bulb/ATC ProbepH Meter: Cole Parmer 5938-10Field Calibration: 4, 7 & 10 pH BuffersConductivity Meter: YSI-SCI-33Field Calibration: 447 & 2070 μ mhoFiltration: .45 μ high capacity disposableOther: —

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics			Water Quality Data			Appearance		REMARKS
	Cumul.Vol. (gal.)	Purge Rate (gpm)	Temp. (°C)	pH	Specific Conductance (cmhos/cm)		Color	Turbidity & Sediment	
					@Field Temp.	@25 C			
1438	2	—	23.4	7.1	—	800	colorless clear	sl ddy	
1445	4	—	22.1	7.16	—	710	"	"	
1453	6	—	22.5	7.19	—	700	"	"	

Water Level (ft. BMP) at End of Purge: 21Sample Intake Depth (ft. BMP): 25

SAMPLE INVENTORY

Bottles Collected				Filtration (Y/N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume ml	Composition (glass, plastic)	Quantity			
1500	40	Glass	2	N	cold, none	VOC's
1	250	Amber Glass	4	N	cold, H ₂ SO ₄	TOC
1	1000	Plastic	1	Y	cold, HNO ₃	METALS
1	1000	Plastic	1	N	cold, none	GENERAL CHEMISTRY
✓	500	Plastic	1	N	H ₂ SO ₄	NITRATE

Chain-of-Custody Record No. 90-3135-5

ABBREVIATIONS:

BMP - Below Measuring Point

BGL - Below Ground Level

Cumul. Vol - Cumulative Volume Removed

ID - Inside Diameter

C - Celsius

gal - gallons

gpm - gallon per minute

in. - inches

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WELL NUMBER or DATE: 7-16-92

Project No.: 91-3135 Project Name: City of San Marcos Landfill Page: 1 of 1

Measuring Point of Well (MP): 100 (PVC)

Measuring Device: Olympic Well Probe #1 AUS

Observations/Comments: _____

Measured by: L. M. Scanlon

Checked by: URF

McCulley, Frick & Gilman, Inc.

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GROUND-WATER SAMPLING RECORD

SAMPLE NUMBER: (b) (6) Page: 1 of 1
Well

Project Number: 90-3135 Project Name: SAN MARCOS LANDFILL Date: 7-17-92
Sampling Location (well ID, etc.): (b) (6) Well
Sampled by: TMS/MFG
Measuring Point (MP) of Well: TOC (PVC)
Screened Interval (ft. BGL):
Filter Pack Interval (ft. BGL):
Starting Water Level (ft. BMP):
Casing Stickup (ft.): 1.6' AGL
Starting Water Level (ft. BGL): 18.18 BMP
Total Depth (ft. BGL):
Casing Diameter (In ID): 4" Di
Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe): Rinse with tap, scrub with non-phosphate soap, rinse, repeat

Cleaning Equipment: Distilled water rinse; disposable teflon bailers used

Purging: Teflon bailer

Sampling: Teflon bailer

Disposal of Discharged Water:

INSTRUMENTS (Indicate make, model, I.D.): pH# 9003002 Cond. # 16076

Water Level: Olympic Well Probe #1 Aus

Thermometer: Hg bulb/ATC Probe

pH Meter: Cole Parmer 5938-10

Field Calibration: 4, 7 & 10 pH Buffers

Conductivity Meter: YSI-SCI-33

Field Calibration: 447 & 2070 μ mhoFiltration: .45 μ high capacity disposable

Other:

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics		Water Quality Data				Appearance		REMARKS
	Cumul.Vol. (gal.)	Purge Rate (gpm)	Temp. (°C)	pH	Specific Conductance (µmhos/cm)		Color	Turbidity & Sediment	
					@Field Temp.	@25 C			
1225	—	—	21.4	7.	—	500	Light yellow tint	Clear	Bail Sample in Teflon Bailor Unable to Pump 4 ft. diameter well - Not in use.

Water Level (ft. BMP) at End of Purge:

Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y/N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume ml	Composition (glass, plastic)	Quantity			
1230	40	Glass	2	N	cold, none	VOC's
1230	1000	Plastic	1	N	cold, none	GENERAL CHEMISTRY

Chain-of-Custody Record No. 90-3135-5

ABBREVIATIONS:

BMP - Below Measuring Point

BGL - Below Ground Level

Cumul.Vol - Cumulative Volume Removed

ID - Inside Diameter

C - Celsius

gal. - gallons

gpm - gallon per minute

In. - inches

McCULLEY, FRICK & GILMAN, INC.

5818 Balcones Drive, Suite 202

Austin, Texas 78731

(512) 371-1667

GROUND-WATER SAMPLING RECORD

(b) (6)

Well

Page: 1 of 1

SAMPLE NUMBER: Tx. Breadbus ServiceProject Number: 90-3135Project Name: SAN MARCOS LANDFILLDate: 7-17-92Sampling Location (well ID, etc.): (b) (6) TXBSSampled by: TMS/MFGMeasuring Point (MP) of Well: TOC (PVC)

Screened Interval (ft. BGL): _____

Filter Pack Interval (ft. BGL): _____

Starting Water Level (ft. BMP): 12.05Casing Stickup (ft.): 1.5

Starting Water Level (ft. BGL): _____

Total Depth (ft. BGL): 29'Casing Diameter (In ID): (Steel) 1.05"

Casing Volume (gal.): _____

QUALITY ASSURANCE

WATER FOR CATTLEMETHODS (describe): Rinse with tap, scrub with non-phosphate soap, rinse, repeatCleaning Equipment: Distilled water rinse; disposable teflon bailers usedPurging: flowSampling: @ SpigotDisposal of Discharged Water: GroundINSTRUMENTS (Indicate make, model, I.D.): pH* 9003002Cond. * 16076Water Level: Olympic Well Probe #1 AusThermometer: Hg bulb/ATC ProbepH Meter: Cole Parmer 5938-10Field Calibration: 4, 7 & 10 pH BuffersConductivity Meter: YSI-SCI-33Field Calibration: 447 & 2070 μ mhoFiltration: .45 μ high capacity disposable

Other: _____

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics		Water Quality Data				Appearance		REMARKS
	Cumul.Vol. (gal.)	Purge Rate (gpm)	Temp. (°C)	pH	Specific Conductance (μ mhos/cm)		Color	Turbidity & Sediment	
					@Field Temp.	@25°C			
1300	—	—	22	7.0	—	1175	Clear	Clear	sample from spigot @ wellhead behind house. Well purged on + off 24 hrs/day on int/lev switch Flow prior to sample.

Water Level (ft. BMP) at End of Purge: _____

Sample Intake Depth (ft. BMP): _____

SAMPLE INVENTORY

Bottles Collected				Filtration (Y/N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume ml	Composition (glass, plastic)	Quantity			
1305	40	Glass	2	N	cold, none	VOC's
				N		
1305	1000	Plastic	1	N	cold, none	GENERAL CHEMISTRY

Chain-of-Custody Record No. 90-3135-5

ABBREVIATIONS:

BMP - Below Measuring Point

BGL - Below Ground Level

Cumul. Vol - Cumulative Volume Removed

ID - Inside Diameter

C - Celcius

gal. - gallons

gpm - gallon per minute

In. - inches

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GROUND-WATER SAMPLING RECORD

Residence

SAMPLE NUMBER:

Page: 1 of 1

Project Number: 90-3135 (b) (6)

SAN MARCOS LANDFILL Date: 7-7-92

Sampling Location (well ID, etc.)

Sampled by: TMS/MFG

Measuring Point (MP) of Well: TOC (PVC)

Screened Interval (ft. BGL):

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 6.85

Casing Stickup (ft.): 2.85

Starting Water Level (ft. BGL):

Total Depth (ft. BGL): 20.9

Casing Diameter (in ID): (BRK) 2.2

Casing Volume (gal.):

QUALITY ASSURANCE Well used for Drinking / Irrigation

METHODS (describe): Rinse with tap, scrub with non-phosphate soap, rinse, repeat

Cleaning Equipment: Distilled water rinse; disposable teflon bailers used

Purging: Flow

Sampling: Spigot

Disposal of Discharged Water: Ground

INSTRUMENTS (Indicate make, model, I.d.): pH* 9003002 Cond. * 16076

Water Level: Olympic Well Probe #1 Aus

Thermometer: Hg bulb/ATC Probe

pH Meter: Cole Parmer 5938-10

Field Calibration: 4, 7 & 10 pH Buffers

Conductivity Meter: YSI-SCI-33

Field Calibration: 447 & 2070 μ mhoFiltration: .45 μ high capacity disposable

Other:

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics		Water Quality Data				Appearance		REMARKS
	Cumul. Vol. (gal.)	Purge Rate (gpm)	Temp. (°C)	pH	Specific Conductance (µmhos/cm)		Color	Turbidity & Sediment	
					@Field Temp.	@25 C			
1325	—	—	23.5	6.85	—	1130	Clear	Clear	Well used in thermion flow 5 min prior to sampling

Water Level (ft. BMP) at End of Purge:

Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y/N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume ml	Composition (glass, plastic)	Quantity			
1340	40	Glass	2	N	cold, none	VOC's
1340	1000	Plastic	1	N	cold, none	GENERAL CHEMISTRY

Chain-of-Custody Record No. 90-3135-5

ABBREVIATIONS:

BMP - Below Measuring Point

BGL - Below Ground Level

Cumul. Vol - Cumulative Volume Removed

ID - Inside Diameter

C - Celsius

gal. - gallons

gpm - gallon per minute

in. - inches

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(512) 371-1667

GROUND-WATER SAMPLING RECORD

Residence

SAMPLE NUMBER

(b) (6)

Page 1 of 1

Project Number: 90-3135

Project Name:

SAN MARCOS LANDFILL

Date: 7/17/92

Sampling Location (well ID, etc.):

Sampled by: TMS/MFG

Measuring Point (MP) of Well: TOC (PVC)

Screened Interval (ft. BGL):

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 8.95

Casing Stickup (ft.): 1.7

Starting Water Level (ft. BGL):

Total Depth (ft. BGL): 20.7

Casing Diameter (in ID) (Grade) 3.0

Casing Volume (gal.):

QUALITY ASSURANCE

Well used for Drinking / Irrigation

METHODS (describe): Rinse with tap, scrub with non-phosphate soap, rinse, repeat

Cleaning Equipment: Distilled water rinse; disposable teflon bailers used

Purging: Flow

Sampling: Spigot

Disposal of Discharged Water: Ground

INSTRUMENTS (Indicate make, model, I.D.): pH* 9003002

Cond. * 16076

Water Level: Olympic Well Probe #1 Aus

Thermometer: Hg bulb/ATC Probe

pH Meter: Cole Parmer 5938-10

Field Calibration: 4, 7 & 10 pH Buffers

Conductivity Meter: YSI-SCI-33

Field Calibration: 447 & 2070 μ mhoFiltration: .45 μ high capacity disposable

Other:

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics			Water Quality Data			Appearance		REMARKS
	Cumul. Vol. (gal.)	Purge Rate (gpm)	Temp. (°C)	pH	Specific Conductance (µmhos/cm)		Color	Turbidity & Sediment	
					@Field Temp.	@25 C			
1345	—	—	23.3	7.12	—	1200	Clear	Clear	Flow well 5 min prior to sampling Well used in AM to wash / irrigate

Water Level (ft. BMP) at End of Purge:

Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y/N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume ml	Composition (glass, plastic)	Quantity			
1350	40	Glass	2	N	cold, none	VOC's
1350	1000	Plastic	1	N	cold, none	GENERAL CHEMISTRY

Chain-of-Custody Record No. 90-3135-5

ABBREVIATIONS:

BMP - Below Measuring Point

BGL - Below Ground Level

Cumul. Vol - Cumulative Volume Removed

ID - Inside Diameter

C - Celsius

gal. - gallons

gpm - gallon per minute

in. - inches

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GROUND-WATER SAMPLING RECORD

SAMPLE NUMBER: (b) (6)

Page: 1 of 1

Project Number: 90-3135

Project Name: (b) (6)

SAN MARCOS LANDFILL

Date: 7-17-92

Sampling Location (well ID, etc.): Pecan Grove

Sampled by: TMS/MFG

Measuring Point (MP) of Well: TOC (PVC)

Screened Interval (ft. BGL):

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP):

Casing Stickup (ft.):

Starting Water Level (ft. BGL):

Total Depth (ft. BGL): 23.0'

Casing Diameter (in ID): (concrete) 2.5'

Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe): Rinse with tap, scrub with non-phosphate soap, rinse, repeat

Cleaning Equipment: Distilled water rinse; disposable teflon ballers used.

Purging: Flow / Boil

Sampling: Spigot

Disposal of Discharged Water: Ground

INSTRUMENTS (Indicate make, model, I.D.): pH* 9003002 Cond. * 16076

Water Level: Olympic Well Probe #1 Aus

Thermometer: Hg bulb/ATC Probe

pH Meter: Cole Parmer 5938-10

Field Calibration: 4, 7 & 10 pH Buffers

Conductivity Meter: YSI-SCI-33

Field Calibration: 447 & 2070 umho

Filtration: .45µ high capacity disposable

Other:

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics			Water Quality Data			Appearance		REMARKS
	Cumul.Vol. (gal.)	Purge Rate (gpm)	Temp. (°C)	pH	Specific Conductance (µmhos/cm)		Color	Turbidity & Sediment	
					@Field Temp.	@25 C			
1/4/10	—	—	23.7	7.12	—	700	Clear	Clear	No Electric Power to pump/purge well - sample with Teflon Baller

Water Level (ft. BMP) at End of Purge:

Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y/N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume ml	Composition (glass, plastic)	Quantity			
1/4/5	40	Glass	2	N	cold, none	VOC's
1/4/5	1000	Plastic	1	N	cold, none	GENERAL CHEMISTRY

Chain-of-Custody Record No. 90-3135-5

ABBREVIATIONS:

BMP - Below Measuring Point

BGL - Below Ground Level

Cumul. Vol - Cumulative Volume Removed

ID - Inside Diameter

C - Celsius

gal. - gallons

gpm - gallon per minute

in. - inches

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GROUND-WATER SAMPLING RECORD

Page: 1 of 1
SAMPLE NUMBER (b) (6) Residence

Project Number: 90-3135 (b) (6) Name: SAN MARCOS LANDFILL Date: 7-17-92
Sampling Location (well ID, etc.): Residence
Sampled by: TMS/MFG
Measuring Point (MP) of Well: TOC STEEL CSy
Screened Interval (ft. BGL):
Filter Pack Interval (ft. BGL):
Starting Water Level (ft. BMP): 15.05
Casing Stickup (ft.): 2.4
Starting Water Level (ft. BGL):
Total Depth (ft. BGL): 30
Casing Diameter (In ID): (Steel) 3.0
Casing Volume (gal.):

QUALITY ASSURANCE GARDEN Irrigation

METHODS (describe): Rinse with tap, scrub with non-phosphate soap, rinse, repeat

Cleaning Equipment: Distilled water rinse; disposable teflon bailers used

Purging: Flow Sampling: spigot

Disposal of Discharged Water: Ground

INSTRUMENTS (Indicate make, model, I.D.): pH* 9003002 Cond. * 16076

Water Level: Olympic Well Probe #1 Aus

Thermometer: Hg bulb/ATC Probe

pH Meter: Cole Parmer 5938-10

Field Calibration: 4.7 & 10 pH Buffers

Conductivity Meter: YSI-SCI-33

Field Calibration: 447 & 2070 μ mhoFiltration: .45 μ high capacity disposable

Other:

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics		Water Quality Data				Appearance		REMARKS
	Cumul.Vol. (gal.)	Purge Rate (gpm)	Temp. (°C)	pH	Specific Conductance (µmhos/cm)		Color	Turbidity & Sediment	
					@Field Temp.	@25 C			
1/435	—	—	22.5	7.13	—	700	Clear	Clear	Flow well 7min prior to sampling well used in April

Water Level (ft. BMP) at End of Purge:

Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y/N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume ml	Composition (glass, plastic)	Quantity			
1/440	40	Glass	2	N	cold, none	VOC's
1/440	1000	Plastic	1	N	cold, none	GENERAL CHEMISTRY

Chain-of-Custody Record No. 90-3135-5

ABBREVIATIONS:

BMP - Below Measuring Point

BGL - Below Ground Level

Cumul. Vol - Cumulative Volume Removed

ID - Inside Diameter

C - Celsius

gal. - gallons

gpm - gallon per minute

In. - inches

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GROUND-WATER SAMPLING RECORD

Residence
SAMPLE NUMBER: (b) (6) Page: 1 of 1

Project Number: 90-3135 Project Name: SAN MARCOS LANDFILL Date: 7-1-92
Sampling Location (well ID, etc.): (b) (6)
Sampled by: TMS/MFG
Measuring Point (MP) of Well: TOC (PVC)
Screened Interval (ft. BGL):
Filter Pack Interval (ft. BGL):
Starting Water Level (ft. BMP): 14.95
Casing Stickup (ft.): 3.65
Starting Water Level (ft. BGL):
Total Depth (ft. BGL): 31
Casing Diameter (in ID): (cement) 3.0
Casing Volume (gal.):

QUALITY ASSURANCE IRRIGATION USE

METHODS (describe): Rinse with tap, scrub with non-phosphate soap, rinse, repeat

Cleaning Equipment: Distilled water rinse; disposable teflon bailers used

Purging: ~~Backwash~~ Flow Sampling: ~~Spigot~~ SpigotDisposal of Discharged Water: ~~Ground~~ Ground

INSTRUMENTS (Indicate make, model, I.d.): pH* 9003002 Cond. * 16076

Water Level: Olympic Well Probe #1 Aus

Thermometer: Hg bulb/ATC Probe

pH Meter: Cole Parmer 5938-10

Field Calibration: 4, 7 & 10 pH Buffers

Conductivity Meter: YSI-SCI-33

Field Calibration: 447 & 2070 μ mhoFiltration: .45 μ high capacity disposable

Other:

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics		Water Quality Data				Appearance		REMARKS
	Cumul. Vol. (gal.)	Purge Rate (gpm)	Temp. (°C)	pH	Specific Conductance (µmhos/cm)		Color	Turbidity & Sediment	
					@Field Temp.	@25 C			
1455	—	—	22.7	7.02	—	800	Clear	Clear	Flow 5 min prior to sample - (b) (6) has been running well during day.

Water Level (ft. BMP) at End of Purge:

Sample intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y/N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume ml	Composition (glass, plastic)	Quantity			
1500	40	Glass	2	N	cold, none	VOC's
1500	1000	Plastic	1	N	cold, none	GENERAL CHEMISTRY

Chain-of-Custody Record No. 90-3135-5

ABBREVIATIONS:

BMP - Below Measuring Point

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ID - Inside Diameter

C - Celsius

gal. - gallons

gpm - gallon per minute

in. - inches

McCULLEY, FRICK & GILMAN, INC.

5818 Balcones Drive, Suite 202

Austin, Texas 78731

(512) 371-1667



August 26, 1992

Municipal Solid Waste Division
Texas Water Commission
P.O.Box 13087
Austin, Texas 78711

Attn: Aida Lichaa

Re: Solid Waste - Permit No. 640
Ground-Water Monitoring
City of San Marcos

Transmitted herewith are results from the third calendar quarter (1992) ground-water monitoring at the City of San Marcos Landfill. Ground-water samples were collected from site monitoring wells on July 16-17, 1992 by McCulley, Frick and Gilman, Inc. (MFG) personnel. Background samples were obtained from monitoring well MW-106. Group 1 parameters were not analyzed in the MW-106 sample; a second sampling trip will be conducted this month to obtain a sample from MW-106 for analysis of Group 1 parameters. Samples for analysis of volatile organic compounds and Group 2,3 and 4 parameters were collected from all seven monitoring wells. Samples from the seven off-site private wells were analyzed for VOCs, pH, specific conductance, total dissolved solids and chloride. The private wells are believed to be the same wells sampled by the Corp of Engineers on August 29, 1990. MFG collected split samples from all fourteen wells for the Texas Water Commission (TWC).

In addition to the completed Groundwater Monitoring Reports for wells MW-101 through MW-107, copies of the NET laboratory reports for these wells and the off-site private wells, chain of custody forms and the field sampling data sheets for all monitoring and off-site wells are enclosed.

The following observations regarding this monitoring event are noted:

- water level elevations in the site monitoring wells on July 16, 1992 were 5 to 9 feet higher than levels measured on September 30, 1991.
- monitoring well MW-106, which was installed on April 20, 1990, contained water for the first time.
- the apparent ground-water flow direction (based on the July 16, 1992 data) is toward the southeast.

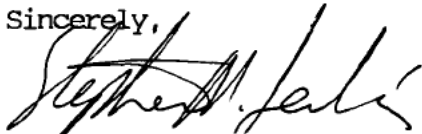
August 26, 1992
Municipal Solid Waste Division
Texas Water Commission
Page 2

- volatile organic compounds were detected in only two of the seven site monitoring wells - MW-102 (chlorobenzene of 9.4 ug/L) and MW-103 (cis-1,2-DCE of 24 ug/L and vinyl chloride of 27 ug/L).

cation-anion balance errors exceeded 5 percent in sample from two of the seven monitoring wells - MW-105 and MW-106. Laboratory re-analysis of major ion concentrations did not materially alter the calculated errors.

- no volatile organic compounds were detected in the water sample from the seven off-site wells, six of which are located generally downgradient of the landfill (the (b) (6) well is upgradient).

Sincerely,



Stephen M. Jenkins, P.E., Director
Environment and Engineering Department

SMJ/as

Enclosure

cc: Mark Vickery (w/o enclosure)

GROUND WATER MONITORING REPORT

TDH Permit No. 640 Monitor Well I.D. No. MW 101
City of San Marcos Landfill

Submittal for Background Data ☒ Semi-annual/Annual Data Fourth Year Data
Purpose of: Groups 1, 2, 3, & 4 Groups 3 & 4 Groups 2, 3, & 4

Date Sampled: 7/17/92 No. of Quarts Collected: 3 liters Sampled by: Tim Scanlon

Representing: Site Operator Consultant ☒ Laboratory Personnel

Well Purged/Bailed Before Sampling: Yes ☒ No How Long Before: Immediately

No. Well Volumes Purged: 3 Depth to Water Before Bailing: 21.04 ft Elev 555.29 MSL

How Were Samples Collected: Decontaminated Teflon Bailer

Were sample preservation procedures in accordance with TDH Guidelines: Yes ☒ No

GROUP	PARAMETER	LEVEL	UNITS	ANALYSIS METHOD
				EPA 600/4-79-020 Rev. 1983
1	Arsenic			
	Barium			
	Cadmium			
	Chromium			
	Copper			
	Lead			
	Mercury			
	Selenium			
	Silver			
	Zinc			
		NOT ANALYZED		
2	Calcium	340.	mg/L	215.1
	Magnesium	50.	mg/L	242.1
	Sodium	330.	mg/L	273.1
	Potassium	26.	mg/L	258.1
	Carbonate	<1.	mg/L	403 Std. Methods
	Bicarbonate (CaCO ₃)	356.	mg/L	403 Std. Methods
	Sulphate	350.	mg/L	375.4
	Fluoride	0.4	mg/L	340.2
	Nitrate (N)	1.13	mg/L	353.3
	Phenolphthalein			
	Alkalinity (CaCO ₃)	<1.	mg/L	310.1
	Alkalinity (CaCO ₃) Total	356.	mg/L	310.1
	Hardness (CaCO ₃)	976.	mg/L	130.2
	Anion-Cation Balance	3.62	% Error	
3	Chloride	680.	mg/L	325.3
	pH	6.7	units	150.1
	Specific Conductance	3,140.	umhos	120.1
	Total Dissolved Solids	2,060.	mg/L	160.1
	Total Organic Carbon	5.	mg/L	415.1
	Total Organic Carbon	4.	mg/L	415.1
	Total Organic Carbon	3.	mg/L	415.1
	Total Organic Carbon	5.	mg/L	415.1
4	Iron	0.12	mg/L	236.1
	Manganese	0.19	mg/L	243.1

Laboratory Representative Signature: See attached report Phone (512) 928-8905

Laboratory Name: NET (Gulf Coast), Inc. Address: 2621-130 Ridgpoint Dr., Austin, Tx 78754

Site Operator Signature: *Stephen M. J. King* Date: 08/26/92 (SE65)

GROUNDWATER MONITORING REPORT

TDH Permit No. 640 Monitor Well I.D. No. MW 102
City of San Marcos Landfill

Submittal for Background Data ☒ Semi-annual/Annual Data Fourth Year Data
Purpose of: Groups 1, 2, 3, & 4 Groups 3 & 4 Groups 2, 3, & 4

Date Sampled: 7/16/92 No. of Quarts Collected: 3 liters Sampled by: Tim Scanlon

Representing: Site Operator Consultant ☒ Laboratory Personnel

Well Purged/Bailed Before Sampling: Yes ☒ No How Long Before: Immediately

No. Well Volumes Purged: 3 Depth to Water Before Bailing: 15.68 ft Elev 553.69 MSL

How Were Samples Collected : Decontaminated Teflon Bailer

Were sample preservation procedures in accordance with TDH Guidelines: Yes ☒ No

GROUP	PARAMETER	LEVEL	UNITS	ANALYSIS METHOD
EPA 600/4-79-020 Rev. 1983				
1	Arsenic			
	Barium			
	Cadmium			
	Chromium			
	Copper			
	Lead			
	Mercury			
	Selenium			
	Silver			
	Zinc			
NOT ANALYZED				
2	Calcium	180.	mg/L	215.1
	Magnesium	29.	mg/L	242.1
	Sodium	260.	mg/L	273.1
	Potassium	40.	mg/L	258.1
	Carbonate	<1.	mg/l	403 Std. Methods
	Bicarbonate (CaCO ₃)	860.	mg/l	403 Std. Methods
	Sulphate	63.	mg/L	375.4
	Fluoride	0.5	mg/L	340.2
	Nitrate (N)	0.61	mg/L	353.3
	Phenolphthalein			
	Alkalinity (CaCO ₃)	<1.	mg/l	310.1
	Alkalinity (CaCO ₃) Total	860.	mg/L	310.1
	Hardness (CaCO ₃)	504.	mg/L	130.2
	Anion-Cation Balance	2.08	% Error	
3	Chloride	220.	mg/L	325.3
	pH	6.4	units	150.1
	Specific Conductance	2,160.	umhos/cm	120.1
	Total Dissolved Solids	1,290.	mg/L	160.1
	Total Organic Carbon	33.	mg/L	415.1
	Total Organic Carbon	34.	mg/L	415.1
	Total Organic Carbon	33.	mg/L	415.1
	Total Organic Carbon	35.	mg/L	415.1
4	Iron	3.1	mg/L	236.1
	Manganese	1.3	mg/L	243.1

Laboratory Representative Signature: See attached report Phone (512) 928-8905

Laboratory Name: NET (Gulf Coast), Inc. Address: 2621-130 Ridgepoint Dr., Austin, TX 78754

Site Operator Signature: Stephen M. Jenkins Date: 08/26/92 (SE65)

GROUND WATER MONITORING REPORT

TDH Permit No. 640 Monitor Well I.D. No. MW 103
City of San Marcos Landfill

Submittal for Background Data ☒ Semi-annual/Annual Data Fourth Year Data
Purpose of: Groups 1, 2, 3, & 4 Groups 3 & 4 Groups 2, 3, & 4

Date Sampled: 7/16/92 No. of Quarts Collected: 3 liters Sampled by: Tim Scanlon

Representing: Site Operator Consultant ☒ Laboratory Personnel

Well Purged/Bailed Before Sampling: Yes ☒ No How Long Before: Immediately

No. Well Volumes Purged: 3 Depth to Water Before Bailing: 18.91 ft Elev 554.28 MSL

How Were Samples Collected: Decontaminated Teflon Bailer

Were sample preservation procedures in accordance with TDH Guidelines: Yes ☒ No

GROUP	PARAMETER	LEVEL	UNITS	ANALYSIS METHOD
				EPA 600/4-79-020 Rev. 1983
1	Arsenic			
	Barium			
	Cadmium			
	Chromium			
	Copper			
	Lead			
	Mercury			
	Selenium			
	Silver			
	Zinc			
		NOT ANALYZED		
2	Calcium	270.	mg/L	215.1
	Magnesium	37.	mg/L	242.1
	Sodium	290.	mg/L	273.1
	Potassium	24.	mg/L	258.1
	Carbonate	<1.	mg/L	403 Std. Methods
	Bicarbonate (CaCO ₃)	620.	mg/L	403 Std. Methods
	Sulphate	250.	mg/L	375.4
	Fluoride	0.4	mg/L	340.2
	Nitrate (N)	0.20	mg/L	353.3
	Phenolphthalein			
	Alkalinity (CaCO ₃)	<1.	mg/L	310.1
	Alkalinity (CaCO ₃) Total	620.	mg/L	310.1
	Hardness (CaCO ₃)	832.	mg/L	130.2
	Anion-Cation Balance	1.08	% Error	
3	Chloride	454.	mg/L	325.3
	pH	6.3	units	150.1
	Specific Conductance	2,670.	umhos/cm	120.1
	Total Dissolved Solids	1,730	mg/L	160.1
	Total Organic Carbon	16.	mg/L	415.1
	Total Organic Carbon	16.	mg/L	415.1
	Total Organic Carbon	15.	mg/L	415.1
	Total Organic Carbon	17.	mg/L	415.1
4	Iron	3.3	mg/L	236.1
	Manganese	7.8	mg/L	243.1

Laboratory Representative Signature: See attached report Phone (512) 928-8905

Laboratory Name: NET (Gulf Coast), Inc. Address: 2621-130 Ridgepoint Dr., Austin, Tx 78754

Site Operator Signature: [Signature] Date: 08/26/92 (SE65)

GROUND WATER MONITORING REPORT

TDH Permit No. 640 Monitor Well I.D. No. MW 104
City of San Marcos Landfill

Submittal for Background Data ☒ Semi-annual/Annual Data ☐ Fourth Year Data
Purpose of: Groups 1, 2, 3, & 4 Groups 3 & 4 Groups 2, 3, & 4

Date Sampled: 7/16/92 No. of Quarts Collected: 3 liters Sampled by: Tim Scanlon

Representing: Site Operator ☐ Consultant ☒ Laboratory Personnel ☐

Well Purged/Bailed Before Sampling: Yes ☒ No ☐ How Long Before: Immediately

No. Well Volumes Purged: 3 Depth to Water Before Bailing: 20.28 ft Elev 554.78 MSL

How Were Samples Collected : Decontaminated Teflon Bailer

Were sample preservation procedures in accordance with TDH Guidelines: Yes ☒ No ☐

GROUP	PARAMETER	LEVEL	UNITS	ANALYSIS METHOD EPA 600/4-79-020 Rev. 1983
1	Arsenic Barium Cadmium Chromium Copper Lead Mercury Selenium Silver Zinc	NOT ANALYZED		
2	Calcium	134.	mg/L	215.1
	Magnesium	11.	mg/L	242.1
	Sodium	120.	mg/L	273.1
	Potassium	3.5	mg/L	258.1
	Carbonate	<1.	mg/L	403 Std. Methods
	Bicarbonate (CaCO ₃)	380.	mg/L	403 Std. Methods
	Sulphate	140.	mg/L	375.4
	Fluoride	0.4	mg/L	340.2
	Nitrate (N)	3.59	mg/L	353.3
	Phenolphthalein			
	Alkalinity (CaCO ₃)	<1.	mg/L	310.1
	Alkalinity (CaCO ₃) Total	380.	mg/L	310.1
	Hardness (CaCO ₃)	344.	mg/L	130.2
	Anion-Cation Balance	1.63	% Error	
3	Chloride	70.	mg/L	325.3
	pH	6.8	units	150.1
	Specific Conductance	1,130.	umhos/cm	120.1
	Total Dissolved Solids	738.	mg/L	160.1
	Total Organic Carbon	1.	mg/L	415.1
	Total Organic Carbon	1.	mg/L	415.1
	Total Organic Carbon	1.	mg/L	415.1
	Total Organic Carbon	1.	mg/L	415.1
4	Iron	0.08	mg/L	236.1
	Manganese	<0.01	mg/L	243.1

Laboratory Representative Signature: See attached report Phone (512) 928-8905

Laboratory Name: NET (Gulf Coast) Inc. Address: 2621-130 Ridgpoint Dr., Austin, Tx 78754

Site Operator Signature: [Signature] Date: 08/26/92 (SE65)

GROUND WATER MONITORING REPORT

TDH Permit No. 640 Monitor Well I.D. No. MW 105
City of San Marcos Landfill

Submittal for Background Data ☒ Semi-annual/Annual Data ☐ Fourth Year Data
Purpose of: Groups 1, 2, 3, & 4 Groups 3 & 4 Groups 2, 3, & 4

Date Sampled: 7/16/92 No. of Quarts Collected: 3 liters Sampled by: Tim Scanlon

Representing: Site Operator ☐ Consultant ☒ Laboratory Personnel ☐

Well Purged/Bailed Before Sampling: Yes ☒ No ☐ How Long Before: Immediately

No. Well Volumes Purged: 3 Depth to Water Before Bailing: 21.88 ft Elev 554.68 MSL

How Were Samples Collected: Decontaminated Teflon Bailer

Were sample preservation procedures in accordance with TDH Guidelines: Yes ☒ No ☐

GROUP	PARAMETER	LEVEL	UNITS	ANALYSIS METHOD EPA 600/4-79-020 Rev. 1983
1	Arsenic Barium Cadmium Chromium Copper Lead Mercury Selenium Silver Zinc		NOT ANALYZED	
2	Calcium Magnesium Sodium Potassium Carbonate Bicarbonate (CaCO ₃) Sulphate Fluoride Nitrate (N) Phenolphthalein Alkalinity (CaCO ₃) Alkalinity (CaCO ₃)Total Hardness (CaCO ₃) Anion-Cation Balance	143. 8. 70. 2.9 <1. 344. 46. 0.5 0.51 <1. 344. 392. 8.26	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L % Error	215.1 242.1 273.1 258.1 403 Std. Methods 403 Std. Methods 375.4 340.2 353.3 310.1 310.1 130.2
3	Chloride pH Specific Conductance Total Dissolved Solids Total Organic Carbon Total Organic Carbon Total Organic Carbon Total Organic Carbon	50. 6.6 837. 547. 3. 3. 2. 2.	mg/L units umhos/cm mg/L mg/L mg/L mg/L	325.3 150.1 120.1 160.1 415.1 415.1 415.1 415.1
4	Iron Manganese	0.05 0.11	mg/L mg/L	236.1 243.1

Laboratory Representative Signature: See attached report Phone (512) 928-8905

Laboratory Name: NET (Gulf Coast), Inc. Address: 2621-130 Ridgepoint Dr., Austin, Tx 78754

Site Operator Signature: [Signature] Date: 08/26/92 (SE65)

GROUND WATER MONITORING REPORT

TDH Permit No. 640 Monitor Well I.D. No. MW 106
City of San Marcos Landfill

Submittal for ☒ Background Data ☐ Semi-annual/Annual Data ☐ Fourth Year Data
Purpose of: Groups 1, 2, 3, & 4 Groups 3 & 4 Groups 2, 3, & 4

Date Sampled: 7/17/92 No. of Quarts Collected: 3 liters Sampled by: Tim Scanlon

Representing: Site Operator ☐ Consultant ☒ Laboratory Personnel ☐

Well Purged/Bailed Before Sampling: Yes ☒ No ☐ How Long Before: Immediately

No. Well Volumes Purged: 3 Depth to Water Before Bailing: 22.30 ft Elev 558.20 MSL

How Were Samples Collected: Decontaminated Teflon Bailer

Were sample preservation procedures in accordance with TDH Guidelines: Yes ☒ No ☐

GROUP	PARAMETER	LEVEL	UNITS	ANALYSIS METHOD EPA 600/4-79-020 Rev. 1983
1	Arsenic Barium Cadmium Chromium Copper Lead Mercury Selenium Silver Zinc	NOT ANALYZED		
2	Calcium	130.	mg/L	215.1
	Magnesium	15.	mg/L	242.1
	Sodium	12.	mg/L	273.1
	Potassium	24.	mg/L	258.1
	Carbonate	<1.	mg/L	403 Std. Methods.
	Bicarbonate (CaCO ₃)	324.	mg/L	403 Std. Methods.
	Sulphate	130.	mg/L	375.4
	Fluoride	0.4	mg/L	340.2
	Nitrate (N)	13.9	mg/L	353.3
	Phenolphthalein			
	Alkalinity (CaCO ₃)	<1.	mg/L	310.1
	Alkalinity (CaCO ₃) Total	324.	mg/L	310.1
	Hardness (CaCO ₃)	344.	mg/L	130.2
	Anion-Cation Balance	7.58	% Error	
3	Chloride	40.	mg/L	325.3
	pH	7.1	units	150.1
	Specific Conductance	1,050.	umhos/cm	120.1
	Total Dissolved Solids	706.	mg/L	160.1
	Total Organic Carbon	1.	mg/L	415.1
	Total Organic Carbon	1.	mg/L	415.1
	Total Organic Carbon	1.	mg/L	415.1
	Total Organic Carbon	1.	mg/L	415.1
4	Iron	0.12	mg/L	236.1
	Manganese	0.01	mg/L	243.1

Laboratory Representative Signature: See attached report Phone (512) 928-8905

Laboratory Name: NET (Gulf Coast), Inc. Address: 2621-130 Ridgpoint Dr., Austin, Tx 78754

Site Operator Signature: [Signature] Date: 01/26/92 (SE65)

GROUND WATER MONITORING REPORT

TDH Permit No. 640 Monitor Well I.D. No. MW 107

City of San Marcos Landfill

Submittal for Background Data ☒ Semi-annual/Annual Data ☐ Fourth Year Data
 Purpose of: Groups 1, 2, 3, & 4 Groups 3 & 4 Groups 2, 3, & 4

Date Sampled: 7/16/92 No. of Quarts Collected: 3 liters Sampled by: Tim ScanlonRepresenting: Site Operator ☐ Consultant ☒ Laboratory Personnel ☐Well Purged/Bailed Before Sampling: Yes ☒ No ☐ How Long Before: ImmediatelyNo. Well Volumes Purged: 3 Depth to Water Before Bailing: 20.17 ft Elev 556.30 MSLHow Were Samples Collected : Decontaminated Teflon BailerWere sample preservation procedures in accordance with TDH Guidelines: Yes ☒ No ☐

GROUP	PARAMETER	LEVEL	UNITS	ANALYSIS METHOD
				EPA 600/4-79-020 Rev. 1983
1	Arsenic			
	Barium			
	Cadmium			
	Chromium			
	Copper			
	Lead			
	Mercury			
	Selenium			
	Silver			
	Zinc			
			NOT ANALYZED	
2	Calcium	100.	mg/L	215.1
	Magnesium	9.	mg/L	242.1
	Sodium	70.	mg/L	273.1
	Potassium	22.	mg/L	258.1
	Carbonate	<1.	mg/L	403 Std. Methods.
	Bicarbonate (CaCO ₃)	282.	mg/L	403 Std. Methods.
	Sulphate	110.	mg/L	375.4
	Fluoride	0.4	mg/L	340.2
	Nitrate (N)	9.6	mg/L	353.3
	Phenolphthalein			
	Alkalinity (CaCO ₃)	<1.	mg/L	310.1
	Alkalinity (CaCO ₃)Total	282.	mg/L	310.1
	Hardness (CaCO ₃)	272.	mg/L	130.2
	Anion-Cation Balance	3.44	% Error	
3	Chloride	28.	mg/L	325.3
	pH	7.0	units	150.1
	Specific Conductance	795.	umhos/cm	120.1
	Total Dissolved Solids	495.	mg/L	160.1
	Total Organic Carbon	1.	mg/L	415.1
	Total Organic Carbon	1.	mg/L	415.1
	Total Organic Carbon	1.	mg/L	415.1
	Total Organic Carbon	1.	mg/L	415.1
4	Iron	0.10	mg/L	236.1
	Manganese	0.02	mg/L	243.1

Laboratory Representative Signature: See attached report Phone (512) 928-8905Laboratory Name: NET (Gulf Coast), Inc. Address: 2621-130 Ridgpoint Dr., Austin, Tx 78754Site Operator Signature: [Signature] Date: 08/26/92 (SE65)



NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Gulf Coast Inc.
Austin Division
2621 Ridgepoint Drive, Suite 130
Austin, TX 78754

Tel: (512) 928-8905
Fax: (512) 928-3208

ANALYTICAL REPORT

Doug Frick
McCULLEY, FRICK & GILMAN, INC.
5818 Balcones Drive
Suite 202
Austin, TX 78731

07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81122

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: MW-101

Date Taken: 07/17/1992

Date Received: 07/17/1992

Alkalinity, bicarb (CACO3)	356.	mg/L
Alkalinity, carbonate (CACO	<1.	mg/L
Alkalinity, phenol (CACO3)	<1.	mg/L
Alkalinity, total (CACO3)	356.	mg/L
Anion/Cation Balance	3.62	% Error
Chloride	680.	mg/L
Fluoride	0.4	mg/L
Hardness, Total	976.	mg/L
N-Nitrate	1.13	mg/L
N-Nitrate/Nitrite	1.12	mg/L
N-Nitrite	0.01	mg/L
pH	6.7 ^	units
Solids, Total Dissolved	2,060.	mg/L
Specific Conductance	3,140.	umhos/cm
Sulfate, Turbidimetric	350.	mg/L
Total Organic Carbon (W) a	5.	mg/L
Total Organic Carbon (W) b	4.	mg/L
Total Organic Carbon (W) c	3.	mg/L
Total Organic Carbon (W) d	5.	mg/L
Calcium, AA	340.	mg/L
Iron, AA	0.12	mg/L
Magnesium, AA	50.	mg/L
Manganese, AA	0.19	mg/L
Potassium, AA	26.	mg/L
Sodium, AA	330.	mg/L

^ Sample analyzed beyond holding time for parameter.


Pam Jupe, Manager
Austin Division





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07/31/1992

JOB NO: 92.1731
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90-3135-5
San Marcos Landfill

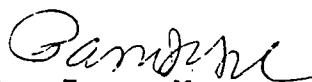
SAMPLE DESCRIPTION: MW-101

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

Acetone	<100.	ug/L
Acrolein	<10.0	ug/L
Acrylonitrile	<10.0	ug/L
Benzene	<5.0	ug/L
Bromodichloromethane	<5.0	ug/L
Bromoform	<5.0	ug/L
Bromomethane	<10.0	ug/L
2-Butanone	<100.	ug/L
Carbon disulfide	<5.0	ug/L
Carbon tetrachloride	<5.0	ug/L
Chlorobenzene	<5.0	ug/L
Chloroethane	<10.0	ug/L
2-Chloroethylvinyl ether	<10.0	ug/L
Chloroform	<5.0	ug/L
Chloromethane	<10.0	ug/L
Dibromochloromethane	<5.0	ug/L
1,1-Dichloroethane	<5.0	ug/L
1,2-Dichloroethane	<5.0	ug/L
1,1-Dichloroethene	<5.0	ug/L
cis-1,2-Dichloroethene	<5.0	ug/L
trans-1,2-Dichloroethene	<5.0	ug/L
1,2-Dichloropropane	<5.0	ug/L
cis-1,3-Dichloropropene	<5.0	ug/L
trans-1,3-Dichloropropene	<5.0	ug/L
Ethylbenzene	<5.0	ug/L
2-Hexanone	<50.0	ug/L
Methylene chloride	<5.0	ug/L
4-Methyl-2-pentanone	<50.	ug/L
Styrene	<5.0	ug/L


Pam Jupe, Manager
Austin Division





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07/31/1992

JOB NO: 92.1731
SAMPLE NO: 81122

90-3135-5
San Marcos Landfill


SAMPLE DESCRIPTION: MW-101

Date Taken: 07/17/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

1,1,2,2-Tetrachloroethane	<5.0	ug/L
Tetrachloroethene	<5.0	ug/L
Toluene	<5.0	ug/L
1,1,1-Trichloroethane	<5.0	ug/L
1,1,2-Trichloroethane	<5.0	ug/L
Trichloroethene	<5.0	ug/L
Trichlorofluoromethane	<5.0	ug/L
Vinyl acetate	<50.0	ug/L
Vinyl chloride	<10.0	ug/L
Xylenes	<5.0	ug/L


Pam Jupe, Manager
Austin Division





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ANALYTICAL REPORT

Doug Frick
McCULLEY, FRICK & GILMAN, INC.
5818 Balcones Drive
Suite 202
Austin, TX 78731

08/17/1992

JOB NO: 92.1729
SAMPLE NO: 81063

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: MW-102

Date Taken: 07/16/1992

Date Received: 07/17/1992

Alkalinity, bicarb (CACO3)	860.	mg/L
Alkalinity, carbonate (CACO	<1.	mg/L
Alkalinity, phenol (CACO3)	<1.	mg/L
Alkalinity, total (CACO3)	860.	mg/L
Anion/Cation Balance	2.08	% Error
Chloride	220.	mg/L
Fluoride	0.5	mg/L
Hardness, Total	504.	mg/L
N-Nitrate	0.61	mg/L
pH	6.4	units
Solids, Total Dissolved	1,290.	mg/L
Specific Conductance	2,160.	umhos/cm
Sulfate, Turbidimetric	63.	mg/L
Total Organic Carbon (W) a	33.	mg/L
Total Organic Carbon (W) b	34.	mg/L
Total Organic Carbon (W) c	33.	mg/L
Total Organic Carbon (W) d	35.	mg/L
Calcium, AA	180.	mg/L
Iron, AA	3.1	mg/L
Magnesium, AA	29.	mg/L
Manganese, AA	1.3	mg/L
Potassium, AA	40.	mg/L
Sodium, AA	260.	mg/L

Pam Jupe
Pam Jupe, Manager
Austin Division





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ANALYTICAL REPORT

Doug Frick
McCULLEY, FRICK & GILMAN, INC.
5818 Balcones Drive
Suite 202
Austin, TX 78731

08/17/1992

JOB NO: 92.1729
SAMPLE NO: 81063

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: MW-102

Date Taken: 07/16/1992

Date Received: 07/17/1992

VOLATILES - 8240 AQUEOUS

Acetone	<100.	ug/L
Acrolein	<10.0	ug/L
Acrylonitrile	<10.0	ug/L
Benzene	<5.0	ug/L
Bromodichloromethane	<5.0	ug/L
Bromoform	<5.0	ug/L
Bromomethane	<10.0	ug/L
2-Butanone	<100.	ug/L
Carbon disulfide	<5.0	ug/L
Carbon tetrachloride	<5.0	ug/L
Chlorobenzene	9.4	ug/L
Chloroethane	<10.0	ug/L
2-Chloroethylvinyl ether	<10.0	ug/L
Chloroform	<5.0	ug/L
Chloromethane	<10.0	ug/L
Dibromochloromethane	<5.0	ug/L
1,1-Dichloroethane	<5.0	ug/L
1,2-Dichloroethane	<5.0	ug/L
1,1-Dichloroethene	<5.0	ug/L
cis-1,2-Dichloroethene	<5.0	ug/L
trans-1,2-Dichloroethene	<5.0	ug/L
1,2-Dichloropropane	<5.0	ug/L
cis-1,3-Dichloropropene	<5.0	ug/L
trans-1,3-Dichloropropene	<5.0	ug/L
Ethylbenzene	<5.0	ug/L
2-Hexanone	<50.0	ug/L
Methylene chloride	<5.0	ug/L
4-Methyl-2-pentanone	<50.	ug/L
Styrene	<5.0	ug/L

Pam Jupe
Pam Jupe, Manager
Austin Division





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ANALYTICAL REPORT

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08/17/1992

JOB NO: 92.1729
SAMPLE NO: 81063

90-3135-5
San Marcos Landfill

SAMPLE DESCRIPTION: MW-102

Date Taken: 07/16/1992

Date Received: 07/17/1992

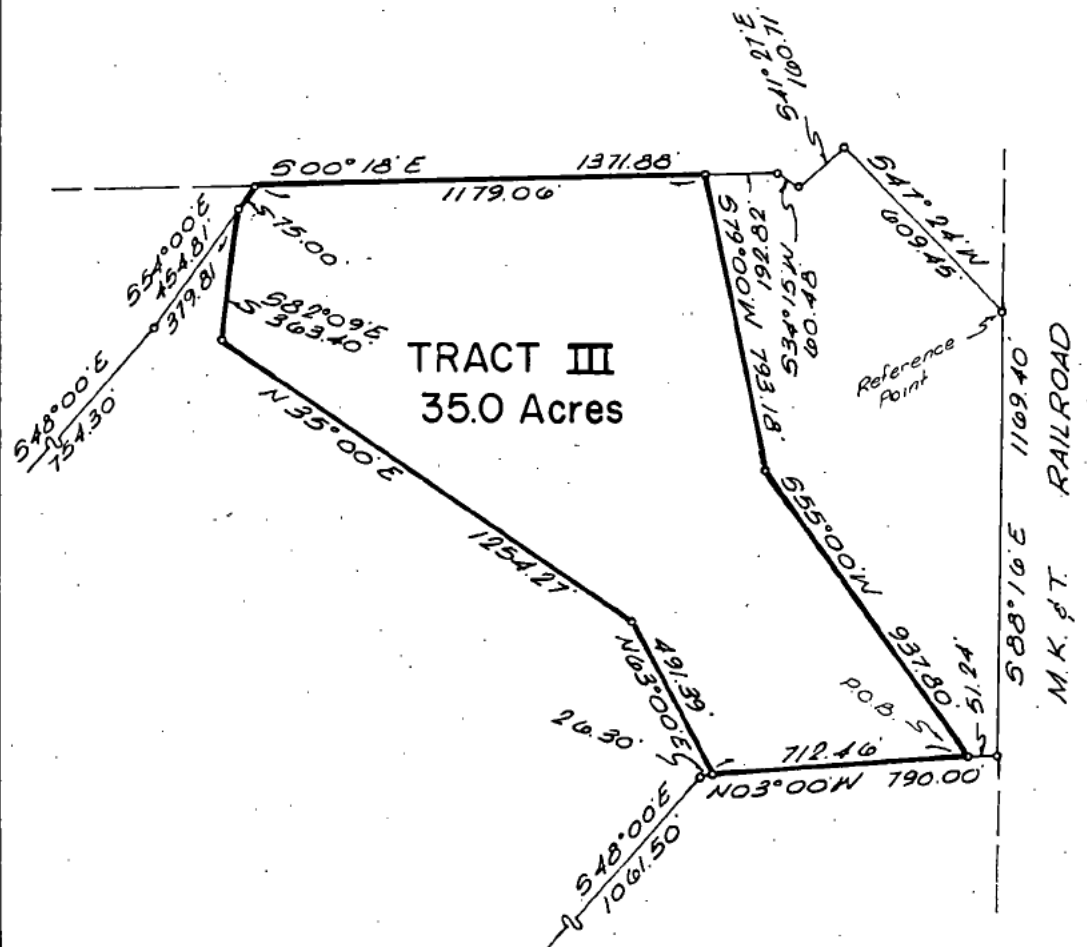
VOLATILES - 8240 AQUEOUS

1,1,2,2-Tetrachloroethane	<5.0	ug/L
Tetrachloroethene	<5.0	ug/L
Toluene	<5.0	ug/L
1,1,1-Trichloroethane	<5.0	ug/L
1,1,2-Trichloroethane	<5.0	ug/L
Trichloroethene	<5.0	ug/L
Trichlorofluoromethane	<5.0	ug/L
Vinyl acetate	<50.0	ug/L
Vinyl chloride	<10.0	ug/L
Xylenes	<5.0	ug/L

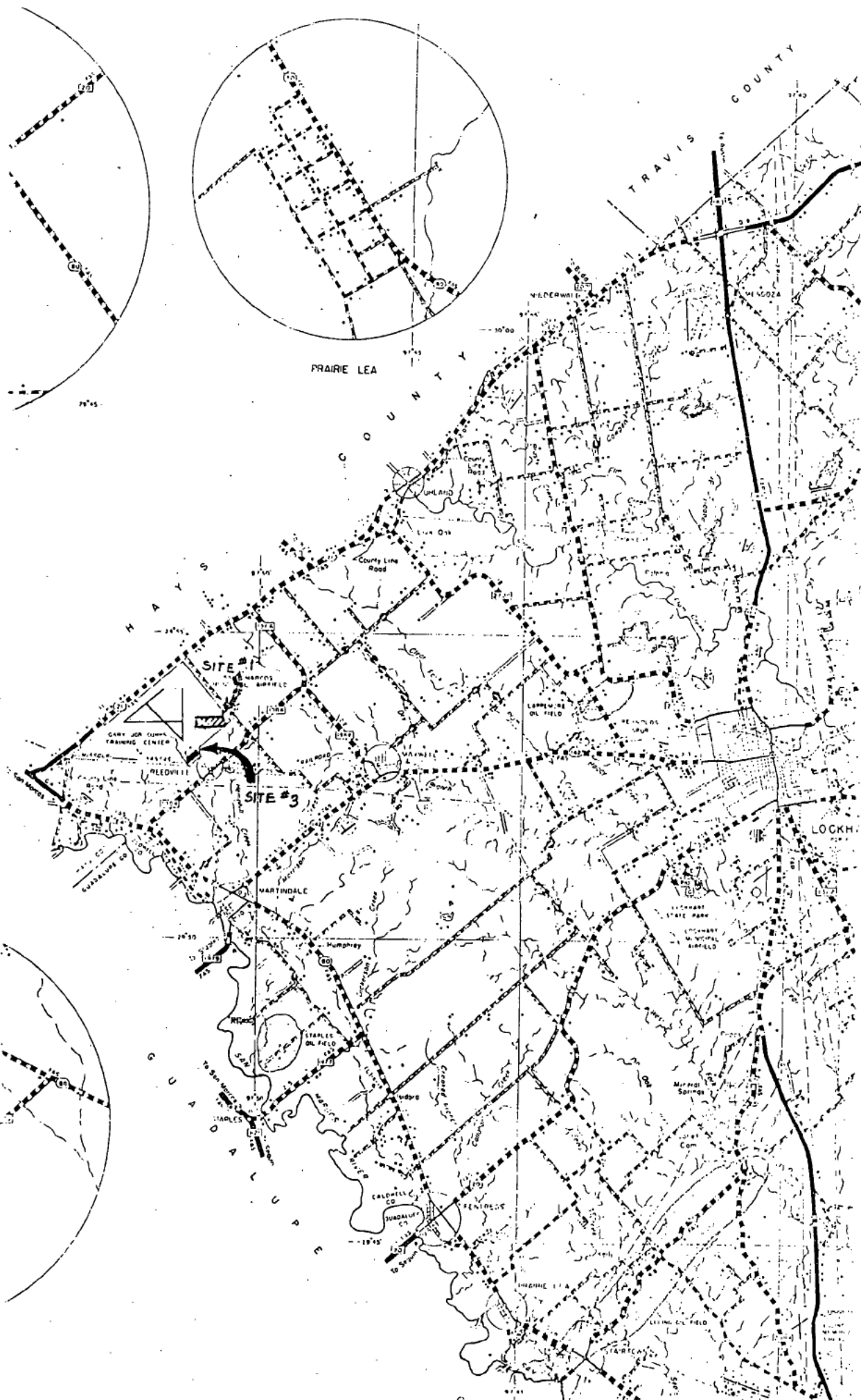
Pam Jupe
Pam Jupe, Manager
Austin Division



Scale 1" = 400'



SEE ATTACHED SHEET



TRACT III
EXHIBIT A

FIELDNOTES FOR 35.00 ACRES OF LAND OUT OF THE WILLIAM PETTUS # 2 LEAGUE CALDWELL COUNTY, TEXAS. BEING A PORTION OF THAT 1303.055 ACRES OF LAND CONVEYED TO THE CITY OF SAN MARCOS BY DEED OF RECORDS IN VOLUME 313, PAGE 463 OF THE DEED RECORDS OF CALDWELL COUNTY, TEXAS AND SAID 35.00 ACRES OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING for reference at a point, said point being the most southerly S/E corner of the above mentioned 1303.055 acres of land, said point being also in the north right-of-way line of the M.K. & T. Railroad;

THENCE with the north right-of-way line of the M.K. & T. Railroad S 88 16'E for a distance of 1169.40 feet to a point;

THENCE N 03 00'W for a distance of 51.24 feet to a point for the most southerly S/W corner of the herein described tract of land and Place of Beginning hereof;

THENCE N 03 00'W for a distance of 712.46 feet to a point for the N/E corner hereof;

THENCE N 63 00'E for a distance of 491.39 feet to a point for the inside corner hereof;

THENCE N 35 00'E for a distance of 1254.27 feet to a point for the most northerly corner hereof;

THENCE S 82 09'E for a distance of 363.40 feet to a point for a corner hereof;

THENCE S 54 00'E for a distance of 75.00 feet to a point for a corner hereof;

THENCE S 00 18'E for a distance of 1179.06 feet to a point for the S/E corner hereof;

THENCE S 79 00'W for a distance of 793.18 feet to a point for an inside corner hereof;

THENCE S 55 00'W for a distance of 937.80 feet to the Place of Beginning and containing 35.00 acres of land more or less.

TEXAS DEPARTMENT OF HEALTH RESOURCES
1100 West 49th Street
Austin, Texas 78756

MUNICIPAL SOLID WASTE DISPOSAL SITE
PERMIT APPLICATION NO. 985
Part B - Technical Data

Please read notes 1 and 2 at the end of Part A before starting to complete Part B. This form and supporting documents must be submitted in twelve copies unless otherwise noted. The applicant is encouraged to read this Department's "Municipal Solid Waste Management Regulations", January 1976 Edition, thoroughly before filling out this form. Failure to complete all entries and provide all necessary attachments will delay processing the application. PLEASE TYPE OR PRINT IN BLACK INK.

I. SITE DATA (Complete this section only if Part B is submitted separately from Part A.)

A. Site Location: _____

B. Name of Applicant: _____

Mailing Address: _____ Telephone _____

_____ Zip Code _____

C. Type of Operation:

Type I _____ / Type II _____ / Type III _____ / Type IV _____ / Type V _____ /

D. Type of Facility:

Landfill _____ / Incinerator _____ / Transfer Station _____ / Other (Specify) _____

_____ /

II. AGENTS FOR THE APPLICANT

Name, address, telephone number and title of persons authorized to act for the applicant. If a registered engineer has been employed to act for the applicant, a letter of appointment, as required by Section C-1.2 of the "Municipal Solid Waste Management Regulations", January 1976, shall be submitted.

III. LAND USE

- A. Describe general land use within a one (1) mile radius of the site: (for example: residential, commercial, industrial, agricultural, etc.)

Airport, Agricultural, Educational, and Low Density

Residential

(Submission of an aerial photograph, though not required, is recommended as it may clarify land use, topography, vegetation, etc., within vicinity of the site.)

- B. Will the operation of this solid waste facility conform with existing zoning ordinances? (yes) Yes (no) If no, give status of any proposed zoning change which will apply to this site.

- C. Growth trends of the area within a one (1) mile radius of the site during the preceding five (5) years, if known.

Moderate Low Density Residential Expansion

- D. Provisions by the applicant for inspection and maintenance of site during first year after closure: (If applicant plans to utilize site on a phased sequence, explain phase schedule.)

See E below.

- E. Has use of the site after closing been determined? Yes X No
If yes, specify type of use.

Agricultural

- F. It is the responsibility of the herein named applicant to possess or acquire a sufficient interest in or right to the use of the property herein described for the purposes for which a permit may be issued. A permit, if issued, does not convey any property rights or interest in either real or personal property, nor does it authorize any injury to private property or invasion of personal rights, nor any infringement of Federal, State or local laws or regulations outside the scope of the authority under which a permit may be issued.

IV. ONE (1) COPY OF A LEGAL DESCRIPTION OF TRACT OR TRACTS OF LAND UPON WHICH THE FACILITY IS LOCATED: The applicant shall provide a signed legal description. The term "Legal Description" means either a metes and bounds description, a plat showing the block and lot number of a recorded subdivision with a reference to the volume and page numbers of the latest conveyance as recorded in the Deed Records of the county in which the tract of land is located, or any other description which would be suitable to effectuate the transfer of title to real property. The legal description should include a copy of the latest conveyance to the owner. Where only a portion of the tract is to be used for the landfill, a metes and bounds description of that portion of land is required.

V. PLANS AND MAPS:

- A. Twelve copies of an area map (if not previously submitted separately with Part A) showing all information required by Section E-1.9 of the "Municipal Solid Waste Management Regulations", January 1976.
- B. Three copies of a large-scale plan of the site, prepared in accordance with the design criteria contained in Section E-1 or F-1 of the "Municipal Solid Waste Management Regulations", January 1976, as appropriate for the type of facility and supported by a narrative statement when necessary, are required. For Type II and III sites, the plan should show all of the information required below which is prefixed by an asterisk (*). Plans for Type I, IV, and V sites should show all of the applicable information required below:

- *1. Site location. (Show boundaries and dimensions of tract of land on which site is to be developed.)
- *2. Location of structures, water wells, any utility easements, and distance to nearest residences.
- *3. Streets and roads providing ingress and egress to site.
- *4. Locations of fences and gates.
- *5. Provisions to be made for controlling windblown solid waste.
- *6. Provisions for handling hazardous materials and large items.
- 7. If the site is for a land disposal facility:
 - *a. The landfill method proposed, e.g., trench, area-fill, (Reference Sec. E-1.8a "Municipal Solid Waste Management Regulations".)
 - *b. The depth of existing groundwater.
 - *c. The maximum depth of excavation or fill.
 - *d. Manner and sequence of site development as they pertain to disposal activities.
 - e. Locations of all soil borings (if required by the Department).
 - *f. The amount of land actually available for landfill.

- *g. Provisions for wet weather operations.
 - *h. Drainage provisions for controlling surface water on or near the site. Show locations of any proposed dikes, berms, or levees to be located along or near streams, rivers, etc.
 - *j. Fire control facilities, e.g., fire hydrants, fire breaks, earth stockpiles, water tanks.
 - k. Existing and finished contours, including the 50-year flood frequency contour if applicable.
 - *l. If an existing pit is to be used, or if sufficient suitable cover material is not available on site, indicate source and soil characteristics of cover material.
8. If the site is for a transfer station, incinerator, or other type of processing facility, provide the additional information required by Section F-1.1, Engineering Plan, of the "Municipal Solid Waste Management Regulations", January 1976.

VI. SOILS AND GEOLOGICAL INFORMATION

- A. Applicants for Type I, IV and V land disposal facilities shall provide three copies of information on soil characteristics at the site, such as permeability, clay and sand content, soil structure, and underlying geology. This information must contain laboratory reports of soil characteristics, including the coefficient of permeability, liquid limit, and plasticity index. This data may be obtained through analysis of samples obtained by borings or excavations. No laboratory work need be performed on highly permeable soil layers which obviously will require lining. For relatively impermeable soils, data is required on soil characteristics from ground level to a depth of no more than five (5) feet below the deepest proposed excavation. With less favorable soil conditions, soil data should be furnished to a depth of twenty (20) feet below the deepest proposed excavation. See Section E-1.3, Soil Data, of the "Municipal Solid Waste Management Regulations", January 1976, for boring requirements.
- B. Applicants for Type II and III facilities shall provide three copies of as much information as available on soil characteristics at the site, such as permeability, clay and sand content, soil structure, and underlying geology. This type of information may be obtained from the nearest office of the U. S. Soil Conservation Service. A report containing this information should be obtained from that agency and submitted to the Department with this application. The Department may require borings for Type II and III sites when soil conditions are considered questionable.

- IX. ENGINEER'S SEAL (NOT REQUIRED FOR TYPE I AND V FACILITIES SERVING LESS THAN 5,000 PERSONS AND TYPE II OR III FACILITIES UNLESS APPLICANT UTILIZES SERVICES OF AN ENGINEER)

If the application and supporting data for a permit are prepared under the direction of a registered professional engineer authorized to practice in the State of Texas, place the signature and seal of the engineer in the spaces below.

Engineer's Signature

William T. Friedrich, P.E.

William T. Friedrich, P.E.



Seal

EXHIBIT 3

AFFIDAVIT OF PUBLISHER

THE CITY OF SAN MARCOS

November 30, 1976


Mr. Roger B. Tyler
Hearings Examiner
Texas Department of Health Resources
1100 West 49th Street
Austin, Texas 78756

Dear Mr. Tyler:

Please find enclosed the publisher's affidavit for notice of public hearing on the solid waste permit application #640, 984 and 985 - The City of San Marcos, Texas. You will notice that these publications occurred on November 18, 1976 in Lockhart, Texas, Caldwell County and San Marcos, Texas, Hays County.

Should you require further information or assistance, please do not hesitate to contact our offices.

Very truly yours,



Doriss Hambrick
City Secretary

DH:lls
Enclosures



THE STATE OF TEXAS

County of Caldwell

I, Louis Moble Jr

of the LOCKHART POST-REGISTER, a newspaper published weekly in Lockhart, in the County of Caldwell, in the State of Texas, do hereby solemnly swear that the notice, of which a true copy is attached hereto, was published in said newspaper in the issues of Nov. 18th A. D. 1926, and

A. D. 19

and that a charge of ¹⁵~~5~~ cents per word for the first insertion and ⁵~~10~~ cents per word for each insertion thereafter, is made, which is our lowest published classified rate.

L Moble Jr

SUBSCRIBED and sworn to before me by

Louis Moble Jr

on this the

18th day of

November

A. D. 1926

Emogene V. Clark

Notary Public in and for Caldwell County, Texas

Post 02247

**NOTICE OF PUBLIC
HEARING**

The City of San Marcos, Texas has applied to the Texas Department of Health Resources for permits to operate certain hereinafter described facilities which are subject to regulation under the Texas Solid Waste Disposal Act. The types of facilities and locations of same are as follows:

(1) Permit Application No. 640, an existing Type I municipal solid waste disposal site located 2.5 miles northeast of intersection of State Highway 80 and FM 1984; 0.5 mile northwest of FM 1984 on east side of and within the environs of San Marcos Municipal Airfield (Camp Gary) in Caldwell County, Texas. The site consists of approximately 84 acres of land and is to receive approximately 82 tons of municipal solid waste per day.

(2) Permit Application No. 984, a proposed Type I municipal solid waste disposal site to be located 1.5 miles northeast of intersection of State Highway 21 and State Highway 80; 950 feet southeast of State Highway 21 and in the southwest corner of and within the environs of San Marcos Municipal Airfield (Camp Gary) in Caldwell County, Texas. The site consists of approximately 52 acres of land and is to receive approximately 82 tons of municipal solid waste per day.

(3) Permit Application No. 985, a proposed Type I municipal solid waste disposal site located 1.5 miles northeast of intersection of FM 1984 and State Highway 80; and 0.4 miles northwest of FM 1984 on north side of Missouri-Kansas-Texas Railroad in the southeast corner of and within the environs of San Marcos Municipal Airfield (Camp Gary) in Caldwell County, Texas. The site consists of approximately 35 acres of land and is to receive approximately 82 tons of municipal solid waste per day.

Pursuant to the provisions of the Texas Solid Waste Disposal Act (Article 4477-7, Vernon's Texas Civil Statutes) and the Texas Department of Health Resources Municipal Solid Waste Management Regulations, and the Administrative Procedure and Texas Register Act, public hearings on the aforesaid applications will be held at:

City Council Chambers
City Hall
630 East Hopkins Street
San Marcos, Texas 78666
at 10:00 a.m., Thursday,
December 16, 1976

to receive evidence for and against the issuance of permits for the aforesaid applications. Each of the applications will be considered separately and on its own merits. All parties having an interest in these matters shall have the right to appear at the hearings, present evidence and be represented by counsel.

Copies of the complete applications may be reviewed at the Texas Department of Health Resources, Austin, Texas, or by contacting the aforesaid applicant.

Issued this 5th day on
November, 1976.

Fratris L. Duff, M.D., Director
Texas Department of
Health Resources

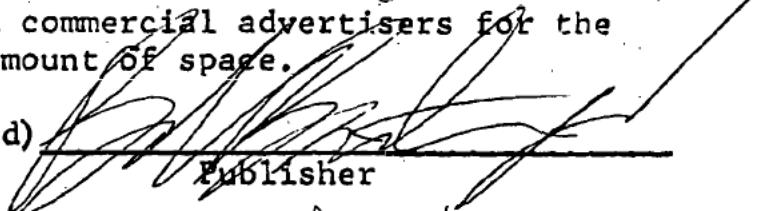
Roger B. Tyler
Hearings Examiner
Texas Department of
Health Resources 11-18c

THE STATE OF TEXAS
County of Hays:

Before me, the undersigned, holding the office of NOTARY PUBLIC

in and for Hays County, Texas, personally appeared Bob Boston,
who states under oath that he is the publisher of the Hays County Citizen,
a weekly newspaper which has been regularly and continuously published in
Kyle, Hays County, Texas, for a period of more than one year immediately
preceding the date of publication of this notice and that the Notice by
Publication hereto attached was published in the regular edition of said
newspaper for a period of one week on the following dates
November 18 1976,
____ 197____,
____ 197____,
____ 197____, a printed clipping of said notice being hereto
attached.

The said publisher further states that the rate charged for this
publication is the lowest rate charged commercial advertisers for the
same class of advertising for a like amount of space.

(Signed) 

Publisher

Subscribed and sworn to before me this 29 day of November 1976,

Rene Miller

NOTARY PUBLIC HAYS COUNTY

NOTICE OF PUBLIC HEARING

The City of San Marcos, Texas has applied to the Texas Department of Health Resources for permits to operate certain hereinafter described facilities which are subject to regulation under the Texas Solid Waste Disposal Act. The types of facilities and locations of same are as follows:

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Pursuant to the provisions of the Texas Solid Waste Disposal Act (Article 4477-7, Vernon's Texas Civil Statutes) and the Texas Department of Health Resources Municipal Solid Waste Management Regulations, and the Administrative Procedure and Texas Register Act, public hearings on the aforesaid applications will be held at:

City Council Chambers
City Hall

630 East Hopkins Street
San Marcos, Texas 78666

at 10:00 a.m., Thursday

December 16, 1976

to receive evidence for and against the issuance of permits for the aforesaid applications. Each of the applications will be considered separately and on its own merits. All parties having an interest in these matters shall have the right to appear at the hearings, present evidence and be represented by counsel.

Copies of the complete applications may be reviewed at the Texas Department of Health Resources, Austin, Texas, or by contacting the aforesaid applicant.

Issued this 5th day of November, 1976.

Fratris L. Duff, M.D., Director
Texas Department of Health Resources

By: /s/ Roger B. Tyler

Hearings Examiner

Texas Department of Health Resources
33-1-1g1

EXHIBIT 4

NOTICES AND LETTERS SENT

STATE OF TEXAS

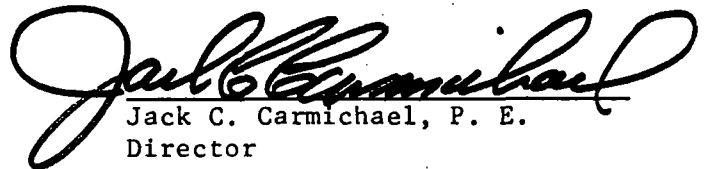
COUNTY OF TRAVIS

I, Jack C. Carmichael, hereby certify that I am Director of the Solid Waste Management Division, Texas Department of Health Resources; that as an employee of the Texas Department of Health Resources in the regular course of business, with the personal knowledge thereof, and at or near the time of the following acts, events or conditions I made a memorandum or record of the following matters pertaining to the solid waste application under Article 4477-7, Vernon's Texas Civil Statutes, for a solid waste permit:

1. Name and address of applicant: City of San Marcos P.A. No.s 640, 984, 985
2. Date application was received: _____
3. A copy of the application was mailed to Texas Air Control Board, to the Texas Water Quality Board, to the Mayor and health authorities of any applicable city or town, and to the County Judge and health authorities of the appropriate county:

	Date Permit Application Sent	Public Hearing Notice Sent
<i>C. J. Marshall</i> <i>Mr. Mrs. Jack Wiede</i> <i>Virgil Guerra, Jr.</i> <i>Code Hawkins</i> a. TACB	<u>NOV 09 1976</u>	<u>NOV 09 1976</u>
b. TWQB	_____	<u>NOV 09 1976</u>
c. TWDB	_____	<u>NOV 09 1976</u>
d. Mayor	_____	<u>NOV 09 1976</u>
e. Judge	_____	<u>NOV 09 1976</u>
f. City Health Authority	_____	_____
<i>Dept. Officer</i> g. County Health Authority	_____	<u>NOV 09 1976</u>
h. Region, TDHR (6)	_____	<u>NOV 09 1976</u>
i. FAA - <i>Houston</i>	_____	<u>NOV 09 1976</u>
j. Corps of Engineers <i>St. Louis</i>	_____	<u>NOV 09 1976</u>
k. Highway Department	_____	_____
<i>Bennie Beck, II</i> l. Representative	_____	<u>NOV 09 1976</u>
<i>Lloyd Daggett</i> m. Senator	_____	<u>NOV 09 1976</u>
n. Texas Pollution Report	_____	<u>NOV 09 1976</u>
o. The Process Company, Inc.	_____	<u>NOV 09 1976</u>

Witness my hand this 15th day of November, 1976.


 Jack C. Carmichael, P. E.
 Director
 Solid Waste Management Division

checked 11-10-76
George P. McMaher



Hex 985

Texas Department of Health Resources

Fratris L. Duff, M.D., Dr.P.H.
Director
Raymond T. Moore, M.D.
Deputy Director

1100 West 49th Street
Austin, Texas 78756
(512) 454-3781

November 5, 1976

Members of the Board

Robert D. Morceton, Chairman
William J. Foran, Vice-Chairman
Royce E. Wisenbaker, Secretary
N. L. Barker Jr.
Roderic M. Bell
Johnnie M. Benson
H. Eugene Brown
Bill Burton
Charles Max Cole
Francis A. Conley
William J. Edwards
Sterling H. Fly Jr.
Raymond G. Garrett
Bob D. Glaze
Blanchard T. Hollins
Maria LaMantia
Philip Lewis

Hon. James Bauger
City Manager
City Hall
San Marcos, Texas 78666

Re: Solid Waste Permit Applications Nos. 640, 984 & 985
The City of San Marcos, Texas

Dear Mr. Bauger:

This is in reference to the above captioned municipal solid waste disposal site permit applications filed with this Department.


Enclosed is a NOTICE OF PUBLIC HEARING which must be published one time in a newspaper of general circulation in both the Counties of Hays and Caldwell since the sites are located in Caldwell and the hearing will be held in Hays County. This Notice must be published in each county at least twenty (20) days prior to the scheduled hearings. Please note that one Notice refers to all applications. Publication is done at the expense of the applicant and a publisher's affidavit must be forwarded to this Department at least five (5) days prior to the scheduled hearings.

The aforesaid affidavit, all correspondence or other material concerning these applications should be sent to:

Texas Department of Health Resources
Division of Solid Waste Management
1100 West 49th Street
Austin, Texas 78756

If we can be of further assistance, please advise.

Very truly yours,


Roger B. Tyler
Hearings Examiner

Enclosure

NOTICE OF PUBLIC HEARING

The City of San Marcos, Texas has applied to the Texas Department of Health Resources for permits to operate certain hereinafter described facilities which are subject to regulation under the Texas Solid Waste Disposal Act. The types of facilities and locations of same are as follows:

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Copies of the complete applications may be reviewed at the Texas Department of Health Resources, Austin, Texas, or by contacting the aforesaid applicant.

Issued this 5th day of November , 1976.

Fratris L. Duff, M. D., Director
Texas Department of Health Resources

By: _____

Roger B. Tyler
Hearings Examiner

Texas Department of Health Resources

Texas Department of Health Resources

AUSTIN

TEXAS THRU: P. W. Mallory, M. D.

INTER-OFFICE

FROM Jack C. Carmichael, P. E.
Director
Division of Solid Waste Management
Solid Waste - Caldwell County

TO George J. Dellaportas, M. D.
Region 6
ATTN: Thomas D. Tiner, P. E.

SUBJECT City of San Marcos - Permit Application No. 985
1.5 Mi. NE of Int. of FM 1984 & SH 80; 0.4 Mi. NW of FM 1984 on N
Side of Missouri Kansas Railroad
Coordinates N 29°52.95' W 97°51.25'

Attached is a copy of an application for a permit to operate a municipal solid waste facility which is located within your region.

The "Municipal Solid Waste Management Regulations" require either the submission of technical data or that a registered professional engineer prepare an engineering report in support of a permit application. Therefore, we consider it appropriate that a professional engineer from your region represent the Texas Department of Health Resources in the conduct of the on-site inspection and evaluation of the application. The "Administrative Procedure and Texas Register Act" (Article 6252-13a, Texas Revised Civil Statutes) requires the applicant's engineer and our representatives to be present at the public hearing and introduce the data under oath.

Please conduct a site evaluation and submit your report within 30 days including the following:

1. To the extent possible, verification of the technical data and other information included by the applicant in the application.
2. If it is an existing facility, complete our standard inspection form including your comments concerning past operation and maintenance.
3. Your opinion concerning the technical adequacy of the existing or proposed facility.
4. Your comments concerning public interest and any significant input you would expect during the public hearing.
5. Other pertinent information which should be considered during our evaluation of this facility.

We appreciate your support of the solid waste management program.

JCC: kjh
Attachment

MMN
JCC

SIGNED _____

DATE November 3, 1976



Texas Department of Health Resources

Fratris L. Duff, M.D., Dr.P.H.
Director

Raymond T. Moore, M.D.
Deputy Director

1100 West 49th Street
Austin, Texas 78756
(512) 454-3781

Members of the Board

Robert D. Moreton, Chairman
William J. Foran, Vice-Chairman
Royce E. Wisenbaker, Secretary
N. L. Barker Jr.
Roderic M. Bell
Johnnie M. Benson
H. Eugene Brown
Bill Burton
Charles Max Cole
Francis A. Conley
William J. Edwards
Sterling H. Fly Jr.
Raymond G. Garrett
Bob D. Glaze
Blanchard T. Hollins
Maria LaMantia
Philip Lewis

November 4, 1976

Mr. Hugh C. Yantis, Jr., P. E.
Executive Director
Texas Water Quality Board
P. O. Box 13246
Capitol Station
Austin, Texas 78711

ATTENTION: Solid Waste Branch
Central Operations Division

Subject: Solid Waste - Caldwell County
City of San Marcos - Permit Application No. 985
1.5 Mi. NE of Int. of FM 1984 & SH 80; 0.4 Mi. NW of FM 1984 on
N Side of Missouri Kansas Railroad
Coordinates N 29°52.95' W 97°51.25'

Dear Mr. Yantis:

Transmitted herewith for your review is a copy of a permit application for a municipal solid waste disposal site.

Section 4(e)(1) of the "Solid Waste Disposal Act", Article 4477-7, Vernon's Texas Civil Statutes, requires that this Department provide you an opportunity to present comments and recommendations on a permit application before the Department acts on the application.

In accordance with the requirements of Section C-2 of this Department's "Municipal Solid Waste Management Regulations" dated January 1976, a public hearing will be held, following due notice, before a permit may be issued. We will advise you of the date and place of the public hearing when it has been scheduled. Although your comments may be submitted at the public hearing, we would appreciate receiving them within 30 days of the date of this letter to assist us in our technical review.

If additional information should be required, please do not hesitate to contact us.

Sincerely,

G. R. Herzik, Jr., P. E.
Deputy Director for Environmental
and Consumer Health Protection

MMH:kjh
Enclosure



Texas Department of Health Resources

Fratis L. Duff, M.D., Dr.P.H.
Director

Raymond T. Moore, M.D.
Deputy Director

November 4, 1976

1100 West 49th Street
Austin, Texas 78756
(512) 454-3781

Members of the Board

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William J. Foran, Vice-Chairman
Royce E. Wisenbaker, Secretary
N. L. Barker Jr.
Roderic M. Bell
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Francis A. Conley
William J. Edwards
Sterling H. Fly Jr.
Raymond G. Garrett
Bob D. Glaze
Blanchard T. Hollins
Maria LaMantia
Philip Lewis

Mr. Charles R. Barden, P. E.
Executive Director
Texas Air Control Board
8520 Shoal Creek
Austin, Texas 78758

ATTENTION: Agency Operations - Planning

Subject: Solid Waste - Caldwell County
City of San Marcos - Permit Application No. 985
1.5 Mi. NE of Int. of FM 1984 & SH 80; 0.4 Mi. NW of FM 1984 on
N Side of Missouri Kansas Railroad
Coordinates N 29°52.95' W 97°51.25'

Dear Mr. Barden:

Transmitted herewith for your review is a copy of a permit application for a municipal solid waste disposal site.

Section 4(e)(1) of the "Solid Waste Disposal Act", Article 4477-7, Vernon's Texas Civil Statutes, requires that this Department provide you an opportunity to present comments and recommendations on a permit application before the Department acts on the application.

In accordance with the requirements of Section C-2 of this Department's "Municipal Solid Waste Management Regulations" dated January 1976, a public hearing will be held, following due notice, before a permit may be issued. We will advise you of the date and place of the public hearing when it has been scheduled. Although your comments may be submitted at the public hearing, we would appreciate receiving them within 30 days of the date of this letter to assist us in our technical review.

If additional information should be required, please do not hesitate to contact us.

Sincerely,

G. R. Herzik, Jr., P. E.
Deputy Director for Environmental
and Consumer Health Protection

MN:kjh
Enclosure

HHR
for JCC

MN
Jme



Texas Department of Health Resources

Fratris L. Duff, M.D., Dr.P.H.
Director
Raymond T. Moore, M.D.
Deputy Director

1100 West 49th Street
Austin, Texas 78756
(512) 454-3781

Members of the Board

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William J. Foran, Vice-Chairman
Royce E. Wisenbaker, Secretary
N. L. Barker Jr.
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Sterling H. Fly Jr.
Raymond G. Garrett
Bob D. Glaze
Blanchard T. Hollins
Maria LaMantia
Philip Lewis

November 4, 1976

General James M. Rose
Executive Director
Texas Water Development Board
P. O. Box 13087, Capitol Station
Austin, Texas 78711

ATTENTION: Mr. Everett W. Rowland, P. E.
Director, Flood Protection and Disaster
Assistance Division

Subject: Solid Waste - Caldwell County
City of San Marcos - Permit Application No. 985
1.5 Mi. NE of Int. of FM 1984 & SH 80; 0.4 Mi. NW of FM 1984 on
N Side of Missouri Kansas Railroad
Coordinates N 29°52.95' W 97°51.25'

Dear General Rose:

Transmitted herewith for your review is a copy of a permit application for a municipal solid waste disposal site.

It is our policy to seek the recommendations of the Texas Water Development Board regarding the requirements of the Texas Water Code. In particular, we will appreciate your recommendations as to whether or not an "Application for Approval of a Levee Project" should be submitted by the applicant.

In accordance with the requirements of Section C-2 of this Department's "Municipal Solid Waste Management Regulations" dated January 1976, a public hearing will be held, following due notice, before a permit may be issued. We will advise you of the date and place of the public hearing when it has been scheduled. Although your comments may be submitted at the public hearing, we would appreciate receiving them within 30 days of the date of this letter to assist us in our technical review.

If additional information should be required, please do not hesitate to contact us.

Sincerely,

G. R. Herzik, Jr., P. E.
Deputy Director for Environmental
and Consumer Health Protection

MDN:kjh
Enclosure
dme



Texas Department of Health Resources

Fratris L. Duff, M.D., Dr.P.H.
Director

Raymond T. Moore, M.D.
Deputy Director

1100 West 49th Street
Austin, Texas 78756
(512) 454-3781

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Blanchard T. Hollins
Maria LaMantia
Philip Lewis

November 4, 1976

Mr. W. N. Dale
Chief, Airports District Office
Federal Aviation Administration
8800 Paul B. Koonce Drive, Room 225
Houston, Texas 77017

Subject: Solid Waste - Caldwell County
City of San Marcos - Permit Application No. 985
1.5 Mi. NE of Int. of FM 1984 & SH 80; 0.4 Mi. NW of FM 1984 on
N Side of Missouri Kansas Railroad
Coordinates N 29°52.95' W 97°51.25'

Dear Mr. Dale:

This Department is evaluating the enclosed permit application for a solid waste disposal site. In view of possible hazards to aircraft from birds attracted to landfill operations, your organization may wish to comment on this application.

In accordance with the requirements of Section C-2 of this Department's "Municipal Solid Waste Management Regulations" dated January 1976, a public hearing will be held, following due notice, before a permit may be issued. We will advise you of the date and place of the public hearing when it has been scheduled. Although your comments may be submitted at the public hearing, we would appreciate receiving them within 30 days of the date of this letter to assist us in our technical review.

If additional information should be required, please do not hesitate to contact us.

Sincerely,

G. R. Herzik, Jr., P. E.
Deputy Director for Environmental
and Consumer Health Protection

MMN:kjh
Enclosure

*How
fence*

MMN

DMC

November 3, 1976

Colonel John F. Wall
District Engineer
Fort Worth District
P. O. Box 17300
Fort Worth, Texas 76102

Subject: Solid Waste - Caldwell County
City of San Marcos - Permit Application No. 985
1.5 MI. NE of Int. of FM 1984 & SH 80; 0.4 MI. NW of FM 1984 on
N Side of Missouri Kansas Railroad
Coordinates N 29°52.95' W 97°51.25'

Dear Colonel Wall:

Transmitted herewith for your review and comment, in consonance with Section 404 of the "Federal Water Pollution Control Act", is a copy of an application for a permit to operate a municipal solid waste disposal site.

In accordance with the requirements of Section C-2 of this Department's "Municipal Solid Waste Management Regulations" dated January 1976, a public hearing will be held, following due notice, before a permit may be issued. Please review this permit application in conjunction with permit application Nos. 640 and 984.

We will advise you of the date and place of the public hearing when it has been scheduled. Although your comments may be submitted at the public hearing, we would appreciate receiving them within 30 days of the date of this letter to assist us in our technical review.

If additional information should be required, please do not hesitate to contact us.

Sincerely,

G. R. Herzik, Jr., P. E.
Deputy Director for Environmental
and Consumer Health Protection

MMN:kjh
Enclosure

cc: Region 6, TDHR
County Health Officer
City Health Officer



Texas Department of Health Resources

Fratris L. Duff, M.D., Dr.P.H.
Director

Raymond T. Moore, M.D.

Deputy Director
November 4, 1976

1100 West 49th Street
Austin, Texas 78756
(512) 454-3781

Members of the Board

Robert D. Moreton, Chairman
William J. Foran, Vice-Chairman
Royce E. Wisenbaker, Secretary
N. L. Barker Jr.
Roderic M. Bell
Johnnie M. Benson
H. Eugene Brown
Bill Burton
Charles Max Cole
Francis A. Conley
William J. Edwards
Sterling H. Fly Jr.
Raymond G. Garrett
Bob D. Glaze
Blanchard T. Hollins
Maria LaMantia
Philip Lewis

Nilon Tallant, M. D., Acting Director
San Marcos-Hays County Health Department
303 West San Antonio Street
San Marcos, Texas 78666

Subject: Solid Waste - Caldwell County
City of San Marcos - Permit Application No. 985
1.5 Mi. NE of Int. of FM 1984 & SH 80; 0.4 Mi. NW of FM 1984 on
N Side of Missouri Kansas Railroad
Coordinates N 29°52.95' W 97°51.25'

Dear Dr. Tallant:

Transmitted herewith for your review is a copy of a permit application for a municipal solid waste disposal site.

Section 4(e)(1) of the "Solid Waste Disposal Act", Article 4477-7, Vernon's Texas Civil Statutes, requires that this Department provide you an opportunity to present comments and recommendations on a permit application before the Department acts on the application.

In accordance with the requirements of Section C-2 of this Department's "Municipal Solid Waste Management Regulations" dated January 1976, a public hearing will be held, following due notice, before a permit may be issued. We will advise you of the date and place of the public hearing when it has been scheduled. Although your comments may be submitted at the public hearing, we would appreciate receiving them within 30 days of the date of this letter to assist us in our technical review.

If additional information should be required, please do not hesitate to contact us.

Sincerely,

Jack C. Carmichael, P. E.
Director
Division of Solid Waste Management

MTN:kjh
Enclosure

cc: Local Health Services, TDHR

M. N.



Texas Department of Health Resources

Fratris L. Duff, M.D., Dr.P.H.
Director

Raymond T. Moore, M.D.

Deputy Director
November 4, 1976

1100 West 49th Street
Austin, Texas 78756
(512) 454-3781

Members of the Board

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Charles Max Cole
Francis A. Conley
William J. Edwards
Sterling H. Fly Jr.
Raymond G. Garrett
Bob D. Glaze
Blanchard T. Hollins
Maria LaMantia
Philip Lewis

Honorable Leonard W. Scott
County Judge
County of Caldwell
Lockhart, Texas 78644

Subject: Solid Waste - Caldwell County
City of San Marcos - Permit Application No. 985
1.5 Mi. NE of Int. of FM 1984 & SH 80; 0.4 Mi. NW of FM 1984 on
N Side of Missouri Kansas Railroad
Coordinates N 29°52.95' W 97°51.25'

Dear Judge Scott:

Transmitted herewith for your review is a copy of a permit application for a municipal solid waste disposal site.

Section 4(e)(1) of the "Solid Waste Disposal Act", Article 4477-7, Vernon's Texas Civil Statutes, requires that this Department provide you an opportunity to present comments and recommendations on a permit application before the Department acts on the application.

In accordance with the requirements of Section C-2 of this Department's "Municipal Solid Waste Management Regulations" dated January 1976, a public hearing will be held, following due notice, before a permit may be issued. We will advise you of the date and place of the public hearing when it has been scheduled. Although your comments may be submitted at the public hearing, we would appreciate receiving them within 30 days of the date of this letter to assist us in our technical review.

If additional information should be required, please do not hesitate to contact us.

Sincerely,

Jack C. Carmichael, P. E.
Director
Division of Solid Waste Management

MMN:kjh
Enclosure

MMN



Texas Department of Health Resources

Fratris L. Duff, M.D., Dr.P.H.
Director
Raymond T. Moore, M.D.
Deputy Director
November 4, 1976

1100 West 49th Street
Austin, Texas 78756
(512) 454-3781

Members of the Board

Robert D. Moreton, Chairman
William J. Foran, Vice-Chairman
Royce E. Wisenbaker, Secretary
N. L. Barker Jr.
Roderic M. Bell
Johnnie M. Benson
H. Eugene Brown
Bill Burton
Charles Max Cole
Francis A. Conley
William J. Edwards
Sterling H. Fly Jr.
Raymond G. Garrett
Bob D. Glaze
Blanchard T. Hollins
Maria LaMantia
Philip Lewis

J. Tom Connolly, M. D.
County Health Officer
214 W. San Antonio St.
Lockhart, Texas 78644

Subject: Solid Waste - Caldwell County
City of San Marcos - Permit Application No. 985
1.5 Mi. NE of Int. of FM 1984 & SH 80; 0.4 Mi. NW of FM 1984 on
N Side of Missouri Kansas Railroad
Coordinates N 29°52.95' W 97°51.25'

Dear Dr. Connolly:

Transmitted herewith for your review is a copy of a permit application for a municipal solid waste disposal site.

Section 4(e)(1) of the "Solid Waste Disposal Act", Article 4477-7, Vernon's Texas Civil Statutes, requires that this Department provide you an opportunity to present comments and recommendations on a permit application before the Department acts on the application.

In accordance with the requirements of Section C-2 of this Department's "Municipal Solid Waste Management Regulations" dated January 1976, a public hearing will be held, following due notice, before a permit may be issued. We will advise you of the date and place of the public hearing when it has been scheduled. Although your comments may be submitted at the public hearing, we would appreciate receiving them within 30 days of the date of this letter to assist us in our technical review.

If additional information should be required, please do not hesitate to contact us.

Sincerely,

Jack C. Carmichael, P. E.
Director
Division of Solid Waste Management

MMN:kjh
Enclosure

MMN

EXHIBIT 5

AGENCY COMMENTS



TEXAS AIR CONTROL BOARD

PHONE 512/451-5711
8520 SHOAL CREEK BOULEVARD

CHARLES R. BARDEN, P. E.
EXECUTIVE DIRECTOR

JOHN L. BLAIR, Chairman
WILLIE L. ULICH, Ph.D., P.E., Vice Chairman
WILLIAM N. ALLAN
JOE C. BRIDGEFARMER, P.E.
FRED HARTMAN

AUSTIN, TEXAS - 78758

CHARLES R. JAYNES
D. JACK KILIAN, M.D.
WILLIAM D. PARISH
E. W. ROBINSON, P.E.

December 15, 1976

Mr. G. R. Herzik, Jr., P.E.
Deputy Director for Environmental
and Consumer Health Protection
Texas Department of Health Resources
1100 West 49th Street
Austin, Texas 78756

Re: Solid Waste - Caldwell County
City of San Marcos - Permit Application No. 985

Dear Mr. Herzik:

We have reviewed the above cited document and recommend approval. An investigation of the site indicates outdoor burning is prohibited under Texas Air Control Board Regulation I, Rule 101.28. We would remind the applicant that the site must be operated in compliance with all Board Rules and Regulations specifically those pertaining to outdoor burning, particulate matter, and nuisances.

Thank you for the opportunity to review this application. If we can be of further assistance, please let me know.

Sincerely yours,

Bill Stewart, P.E.
Deputy Director
Control and Prevention

cc: Mr. Eugene Fulton, Regional Supervisor, Waco



Texas Department of Health Resources

AUSTIN

TEXAS

INTER-OFFICE

FROM Earl A. Ballman, P. E. TO To: G. R. Herzik, Jr., P. E.
For: Jack C. Carmichael, P. E.

SUBJECT Solid Waste - Caldwell County
City of San Marcos - Permit Application No. 985 - Site 3 (35 acres)
1.5 Mi. NE of Int. of FM 1984 & SH 80; 0.4 Mi. NW of FM 1984 on N side
of Missouri Kansas Railroad
Coordinates: N 29° 52.95' W 97° 51.25'

In response to your memorandum dated November 3, 1976, Mr. James S. Burwell, R. S., San Marcos-Hays County Health Department, and the writer, inspected the subject solid waste site on November 30, 1976. The following comments are made for your information along with an attached copy of the completed inspection report:

The proposed solid waste site contains 35 acres. It is located in the southeast corner of the City's Camp Gary property and on the north side of the Missouri Kansas Railroad. Surface drainage in the immediate area is to the south and east.

The soil in this area is clay of medium to high plasticity. According to the permit application, part of this area contains highly permeable soil that may make it unsuitable for landfill operation unless the trenches are lined. Landfill trenches should not be dug in the area where permeable soil would be encountered.

The presence of free water at approximately ten feet indicates that landfill trench depths would be limited to seven feet. The sides and bottoms of all landfill trenches or disposal areas must be properly lined with a minimum of three (3) feet of selected impermeable clay-type material to prevent the percolation of leachate into the groundwater.

Suitable working face dikes and/or any other suitable water diversion methods should be provided to control and minimize the flow of rain or surface water onto and/or through the disposal area to minimize contact between the water and solid waste.

Rainfall runoff within the landfill trenches must not be discharged from the site.

Solid waste sites 1 and 2, if permitted by the State, are expected to serve San Marcos' needs until 1990. Prior to that time, the City should reevaluate its solid waste disposal needs and methods before considering using site 3, if approved.

Based on the review of the application and inspection of the disposal site, it is the writer's opinion that the disposal of municipal waste at this site may be conducted in consonance with applicable health and sanitation laws, but at high cost to the City and the risk of underground water pollution. The high cost to the City would be brought about by the relocation of roads, relocation of ditches, maximum trench depth of seven feet, and lining of trenches

If additional information is needed, please let me know. SIGNED 

R. A. B.

a

12-8-76

INSPECTION REPORT

Proposed Site 3
35 acres

MUNICIPAL SOLID WASTE DISPOSAL SITE

TEXAS DEPARTMENT OF HEALTH RESOURCES

1. Permit or Application No. 985 Classification Type I
2. Location: County Caldwell City San Marcos Region 6
Street or Road 1.5 Mi. NE of Int. of FM 1984 & SH 80, 0.4 mi. NW of FM 1984 on N. side of
Coordinates N 29° 52.95' W 97° 51.25' MKRR
3. Name of Disposal Site San Marcos Sanitary LF Site Owner City of San Marcos
Site Operator (City, ~~Caldwell~~ San Marcos)
Area Served San Marcos and surrounding area Population Served 30,000
4. Officials Contacted During Visit William T. Friedrich, Director of Public Works (512) 392-
5. Persons Participating in Inspection Earl A. Ballman, P. E., TDHR, James S. Burwell, San Marcos-Hays County Health Dept., Ramino Lugo, San Marcos Sanitary Director
6. Officials Responsible for Site Mayor Emmie Craddock and Jim Baugh, City Manager, San Marcos City Hall, 630 E. Hopkins, San Marcos 78666
7. Purpose of Inspection memo dated November 4, 1976, request engineering inspection and preparation reports in support of a permit application
8. Date of Last Inspection Initial Date of Last Correspondence 11-4-76
9. Land Use Within One Mile of Disposal Site agricultural, Gary Job Corps Training Center, San Marcos Municipal Airport & low density residential
10. Brief Description of Site and Operation: Trench proposed Area Other
Depth at Deepest Excavation proposed 8 ft.
11. Size of Site 35 acres Amount of Land Remaining 35 acres
12. Distance to: Public Road 300 ft. Water Well 480 ft. Residence 360 ft.
Stream 2600 ft. Airport 1040 ft. Business 1100 ft.
13. Refuse Collection: City X County Contractor Individuals X

14. Access

- E-1.2b A. All weather access to an unloading area provided?.....yes
E-1.9 B. Is waste along the road to the site a problem?.....N/A

E-1.2c 15. Security

- A. Is the site adequately fenced with lockable gates?.....no
B. If lockable gates are used, are adequate containers provided outside the gates when the site is closed?.....N/A
C. If containers are provided, are they effectively utilized?.....N/A
D. If lockable gates are not provided are alternate means of access control authorized by the Department?.....N/A
E. If alternate means are authorized, are they effective?.....N/A

16. Water Pollution

- E-1.4a A. Is solid waste placed in groundwater?N/A
E-1.4a B. Were leachates observed? (If yes, discuss in comments).....N/A
E-1.5 C. Is solid waste deposited within 500 feet of a public water system raw water intake or a water treatment plant?.....no
E-1.5 D. Solid waste deposited within 500 feet of a drinking water supply well?..yes
E-1.6a E. Can surface drainage enter working face or excavation?...drainage ditches to relocate

1. Site subject to Flooding? possible when flooded? --
Use application as source --

17. Operational Standards

not to be

- A. Burning observed or in evidence? burned Burning authorized? ?
B. Adequate fire protection provided? yes Method? San Marcos Fire Dept
C. Attendant on duty when site is open? will
D. Adequate signs posted for internal control when attendant is not
on duty? N/A
E. Unloading of waste confined to as small an area as possible? N/A
F. Blowing paper problem? N/A Controls N/A
G. Are hazardous materials accepted? none
If yes, cover in comments.
H. Adequate provisions for: Brush N/A Dead animals N/A Bulky items N/A
I. Fly population N/A Evidence of rodents N/A Birds N/A
J. Is scavenging occurring? no
K. Is cover adequate and applied at required frequency? N/A
L. Closed sections of landfill properly maintained? N/A
M. Is site in compliance with all permit special provisions? N/A
If no, explain in comments.
N. Adequate equipment and maintenance of equipment provided? yes
O. Adequate staff provided for proper disposal? yes
P. If salvaging is practiced is it adequately controlled? yes

18. Improvements since previous inspection: --

19. Summary of non-compliance: --

20. Comments (use additional sheets as necessary): --

21. Recommendations (use additional sheets as necessary): --

22. Action requested of Central Office: --

Inspected by Earl A. Ballman Date 11-30-76
Approved by [Signature] Date

Please attach copies of letters originated by Regional Office)



1700 North Congress
Stephen F. Austin Building
Box 13246 Capitol Station
Austin, Texas 78711

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MRS
6
J. Douglass Toole
CHAIRMAN
Frank H. Lewis
VICE CHAIRMAN
M. F. Frost
Fratis L. Duff, MD
Clayton T. Garrison
Ben Ramsey
James M. Rose
Hugh C. Yantis, Jr
EXECUTIVE DIRECTOR

November 26, 1976

RE: Municipal Solid Waste,
City of San Marcos,
Permit Application No. 985, Area III
Proposed Site Evaluation
Caldwell County

Mr. G. R. Herzik, Jr., P. E.
Deputy Director for Environmental
and Consumer Health Protection
Texas Department of Health Resources
1100 West 49th Street
Austin, Texas 78756



Dear Mr. Herzik:

The Texas Water Quality Board has received your letter dated November 4, 1976 requesting us to review and evaluate the water quality aspects of the application and supporting information from the City of San Marcos for a municipal solid waste disposal site. We note that in addition to this proposed site (P. A. 985, Area III) the City of San Marcos has applied to the Texas Department of Health Resources for permits to operate two other disposal sites which are located in the vicinity of Camp Gary. One of these is an existing site (P. A. 640, Area I) while the other is a proposed site (P. A. 984, Area II).

The generalized geologic setting as set forward in the letter of this date concerning permit application No. 640 (Area I) is also applicable to this site. The available information indicates that the site is underlain at a relatively shallow depth by permeable groundwater-bearing soil material which yields water to numerous wells in the area.

The subsurface soils investigation report contained the logs of two auger borings which were drilled in Area III. These borings suggest that soil material described as dark gray clay with calcareous particles (CH) and as tan clay with caliche (CH) occurs in the upper 5 1/2 to 6 1/2 feet at the site. This material is in turn underlain to the total depth of the borings (i.e. to 15.0

Mr. G. R. Herzik, Jr.

Page 2

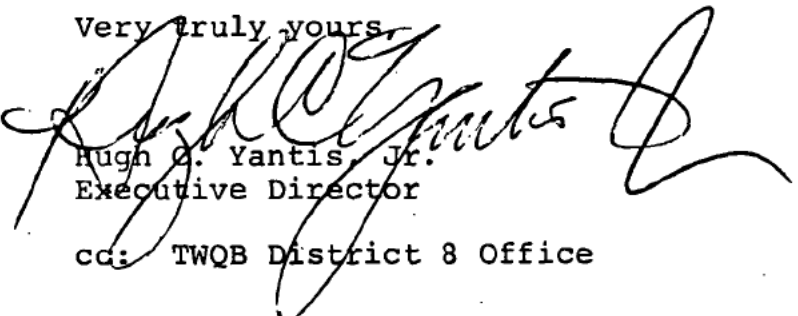
November 26, 1976

and 10.5 feet) by material described as tan sandy clay with caliche (moist) (CL). Groundwater was encountered at 13.1 feet below the ground surface in one of the borings and the water surface rose to within 10.1 feet of the ground surface within 10 minutes after the water-bearing stratum was penetrated. The other boring encountered a "rock layer or boulder" at 10.5 feet and the boring was halted at this level. A limited amount of Atterberg limit data was submitted for the soil material underlying the disposal site; however, there was a complete lack of permeability test data. The operational plan for Area III contained in the engineering report suggests that the trenches at the site should not be excavated to a depth greater than eight feet.

In the absence of further detailed information which clearly indicates that all trenches will be excavated into soil material which is sufficiently impermeable to adequately prevent the exfiltration of leachates from the site and which clearly delineates the groundwater levels at the proposed disposal site, it appears that the site may pose a potential hazard to the groundwater resources of the area. If this site is approved by the Texas Department of Health Resources, the six comments set forward in the letter of this date concerning permit application No. 640 (Area I) may be considered to decrease the hazard to the ground and surface water quality in the vicinity of the proposed disposal site. Comment number three should be reworded to state "Monitor wells should be installed and sampled on a periodic schedule."

If we may be of further assistance, please contact us.

Very truly yours,



Hugh G. Yantis, Jr.
Executive Director

cc: TWQB District 8 Office

TEXAS WATER DEVELOPMENT BOARD

MEMBERS

A. L. BLACK, CHAIRMAN
FRIONA

ROBERT B. GILMORE, VICE CHAIRMAN
DALLAS

MILTON T. POTTS
LIVINGSTON

JOHN H. GARRETT
HOUSTON

GEORGE W. McCLESKEY
LUBBOCK

GLEN E. RONEY
MC ALLEN



P.O. BOX 13087
CAPITOL STATION
AUSTIN, TEXAS 78711
November 24, 1976

JAMES M. ROSE
EXECUTIVE DIRECTOR

AREA CODE 512
475-3187
1700 NORTH CONGRESS AVENUE

IN REPLY REFER TO:
TWDBE

Mr. G. R. Herzik, Jr., P.E.
Deputy Director for
Environmental and Consumer
Health Protection
Texas Department of Health Resources
1100 W. 49th Street
Austin, Texas 78756

Dear Mr. Herzik:

Reference is made to your letter of November 4 concerning Application No. 985 for the City of San Marcos' municipal solid waste disposal site located 1.5 miles northeast of the intersection of Farm-to-Market Road 1984 and State Highway 80 and 0.4 mile northwest of Farm-to-Market Road 1984 on the north side of the Missouri Kansas Railroad track. A review of this application has been made.

An Application for Approval of a Levee Project need not be filed for this proposal. It was determined from our review that the proposed project, since it will not change the floodwater of any stream, does not come within the purview of the Texas Water Development Board authority under Section 11.458 of the Texas Water Code.

Sincerely,

Everett W. Rowland

Everett W. Rowland, P.E.
Director
Flood Protection and
Disaster Assistance Division



a



DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102

REPLY TO
ATTENTION OF

gcc

SWFOD-R

11 November 1976

Mr. G. R. Herzik, Jr.
Deputy Director of Environmental
and Consumer Health Protection
Texas Department of Health Resources
1100 West 49th Street
Austin, Texas 78756



Dear Mr. Herzik:

This is in reply to the following permit applications to operate municipal solid waste disposal sites:

- a. Nos. 984 and 985 by the City of San Marcos located in Caldwell County.
- b. Nos. 753, 894, 895, 896 and 897 by the County of Nacogdoches located in Nacogdoches County.

All the applications and supporting documents have been reviewed. I find that Corps of Engineers permits under Section 404 of the Federal Water Pollution Control Act will not be required since fill materials will not be discharged into waters of the United States or in contiguous or adjacent wetlands.

Thank you for the opportunity to comment on these applications.

Sincerely yours,

JOHN S. JARBOE
Chief, Reservoir Branch



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DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

November 11, 1976

SOUTHWEST REGION
Houston Airports District Office
8800 Paul B. Koonce Drive, Room 225
Houston, Texas 77061



Solid Waste - Caldwell County
City of San Marcos - Permit Application No. 985
1.5 Mi. NE of Int. of FM 1984 and SH 80; 0.4 Mi. NW
of FM 1984 on N Side of Missouri Kansas Railroad
Coordinates: N 29° 52.95' W 97° 51.25'

Mr. G. R. Herzik, Jr., P. E.
Deputy Director for Environmental
and Consumer Health Protection
Texas Department of Health Resources
1100 West 49th Street
Austin, Texas 78756

Dear Mr. Herzik:

We have reviewed the subject proposal for a permit to operate a solid waste disposal site at the stated location and shown on the map accompanying the application.

We have previously reviewed Permit Application No. 640 and provided comments thereon dated June 23, 1976. We have also recently received a telephone report from Mr. John Burks of your office reporting that he had recently investigated the subject site and found no bird problem to exist. He further reported that continual coverage was being used.

Based on our previous inspection and Mr. Burks' recent inspection, the comments provided in our letter of June 23, 1976, are applicable to subject site, and we offer no objection to issuance of a permit to continue operation of subject landfill.

Please condition the permit on the City's continued monitoring of the site to insure compliance with Municipal Solid Waste Regulations, and should the landfill become a noticeable bird attractant that could endanger aircraft, taking whatever steps necessary to eliminate the hazard, including closure of the landfill.

Sincerely,


WILLIAM N. DALE
Chief, Houston Airports District Office



EXHIBIT 6

**MUNICIPAL SOLID WASTE
MANAGEMENT REGULATIONS**

The regulations are available for viewing at
the Texas Department of Health Resources in Austin,
Texas and are incorporated herein by reference.

EXHIBIT 7

LETTERS OF PROTEST

AND

LETTERS OF SUPPORT

The State of Texas House of Representatives

Bennie Bock II
State Representative

December 13, 1976

District 38
Caldwell / Comal / Guadalupe

Mr. Jack C. Carmichael
Chief, Solid Waste Branch
Division of Environmental Engineering
Texas Department of Health Resources
1100 West 49th Street
Austin, Texas 78756

Re: Solid Waste Disposal Sites
City of San Marcos
Permit Application Nos.
640, 984, and 985

Dear Mr. Carmichael:

As the State Representative for District 38, which includes Caldwell County, I am deeply concerned about the dumping of garbage in Camp Gary. As you may know, Camp Gary is located totally within Caldwell County and, therefore, as stated above, is in my legislative district. The dump, as it is now operated, poses a significant threat to the health of nearby inhabitants. Factors which contribute to this hazard are the practices of dumping raw garbage into standing water only a few feet above the groundwater level and allowing garbage to be blown off the site area. Further, the Camp Gary location is a poor choice for this disposal site. An airport is close at hand, the soil in the area is porous, water wells are nearby, and, most importantly, there are people living very near the area. A better site should be found so that San Marcos can in fact dispose of its refuse in a sanitary and safe manner.

I urge the Texas Department of Health Resources to deny the applications for Permit Nos. 640, 984, and 985.

Sincerely,


Bennie Bock II

BB/ds

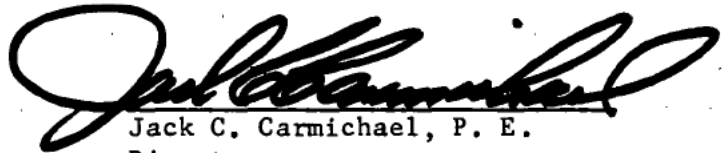


STATE OF TEXAS

COUNTY OF TRAVIS

I, Jack C. Carmichael, P. E., Director, Solid Waste Management Division, Texas Department of Health Resources, hereby certify that I am a custodian of the files relating to Article 4477-7, Vernon's Texas Civil Statutes, and as such I attest that the foregoing is a true and correct copy of documents on file with the Texas Department of Health Resources relating to the solid waste matters shown therein.

GIVEN UNDER MY HAND, this 13th day of December, 1976.

A large, stylized handwritten signature in black ink, appearing to read "Jack Carmichael".

Jack C. Carmichael, P. E.
Director
Solid Waste Management Division
Texas Department of Health Resources

Applications 640, 984 and 985
were heard in a common hearing.
See #640 for Exhibits 8-21, inclusive.